Smart Care
MEDICAL
KOREA

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SMART CARE

Transplantation

MEDICAL KOREA

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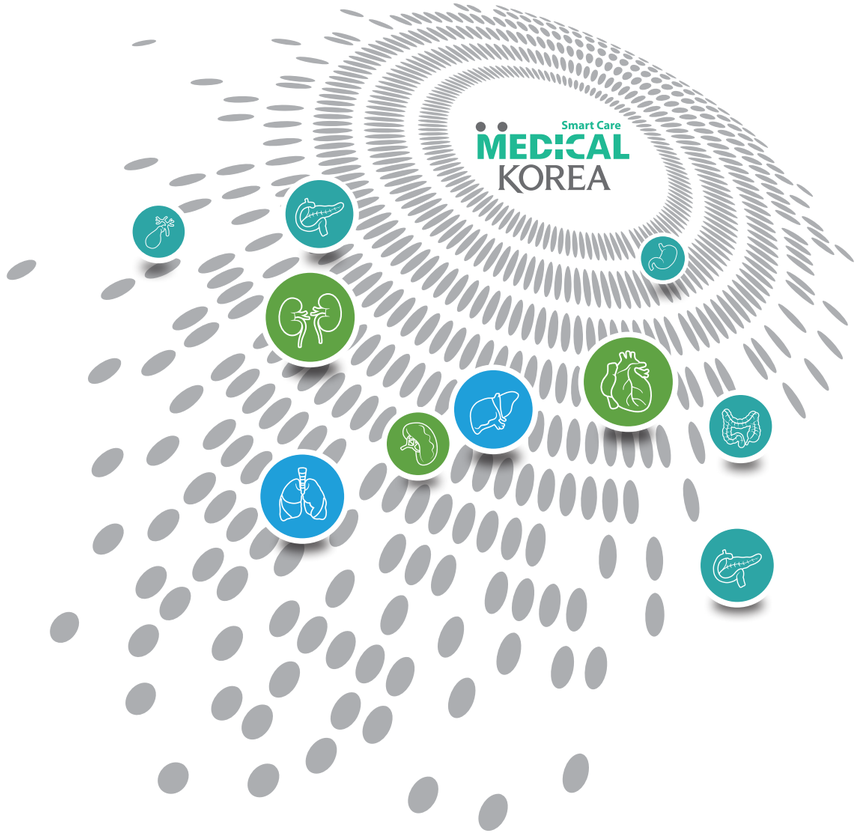
Korea, Global Leader in Organ Transplantation and Bone Marrow Transplantation



MINISTRY OF HEALTH & WELFARE

KHIDI Korea Health Industry Development Institute

SMART CARE

Transplantation

Korea, Global Leader in Organ Transplantation and
Bone Marrow Transplantation

MEDICAL KOREA IS

KEY TO HEALTH

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"Medical Korea is the national brand that represents Korea's excellence in medical service."

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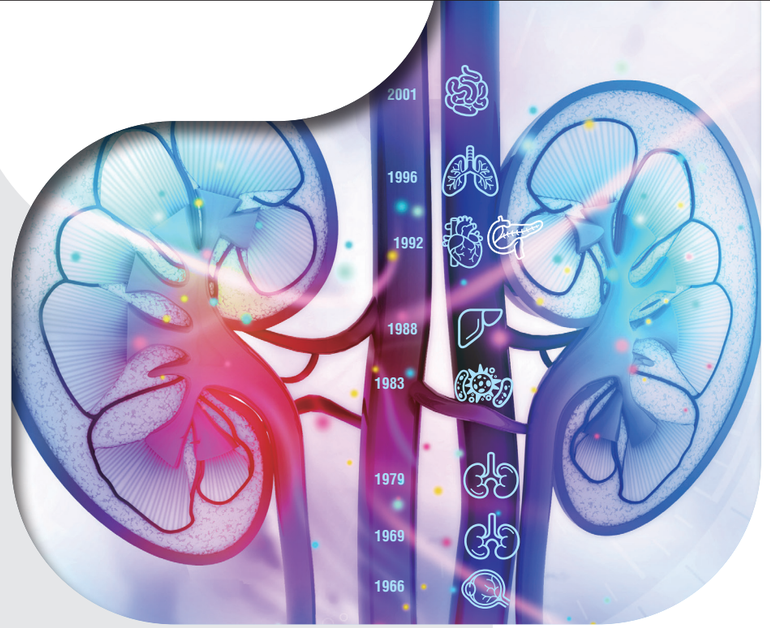


I

The past and the present of Transplantation in Korea

I

The past and present of Transplantation in Korea

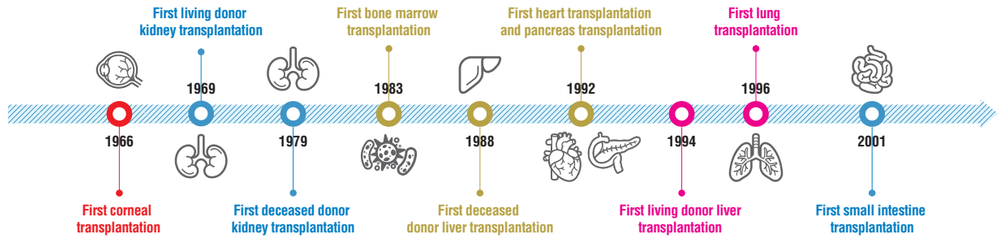
Development of transplantation technologies in Korea

Korea's transplantation history started with the foundation of the Korea Society of Transplantation in December 1996 and the survival rate of transplanted organs has come to be significantly improved thanks to the introduction of Cyclosporine in 1984. With Korea's rapid economic growth, its organ transplantation sector has been growing at a fast pace as well. In addition, following the Korean Medical Association announcement of its official acceptance of brain death in 1993 and the adoption of the Seoul Declaration at the 4th Asia Transplantation Conference in 1995, officially accepting brain death as death, the transplantation of the organs of brain death patients became widely publicized at a national level.

The enforcement of the Act on Organ Transplantation on February 9, 2000 and the foundation of KONOS (Korea Network for Organ Sharing) led to fair and efficient organ distribution and management as well as the prevention of illegal organ trade.

Eventually, the number of brain dead patients donating their organs was growing steadily, and in May 2009, the Korea Organ Donation Agency, an official organ obtaining institution designated by the Ministry of Health and Welfare, was founded to carry out general and essential work in various fields related to the donation of brain dead patients' organs.

Trace of transplantation in Korea

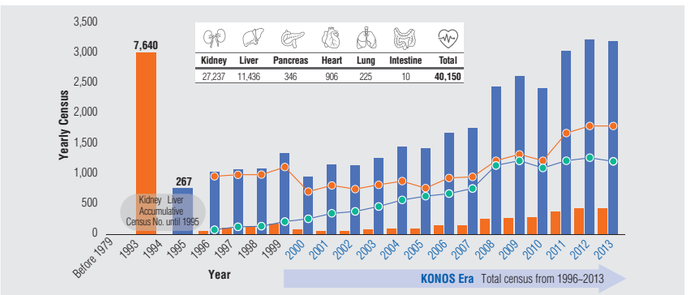


Milestones of Korean transplantation history

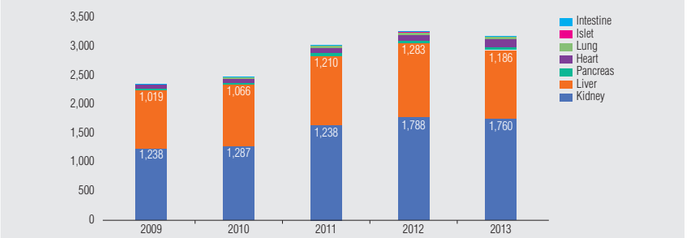
The history of organ transplantation in Korea started in the 1960s with the first corneal transplantation and living donor kidney transplantation. The range of transplantation expanded to the transplantation of kidneys from brain death patients in the 1970s, bone marrow transplantation and liver transplantation in the 1980s, pancreas transplantation, heart transplantation and lung transplantation in the 1990s and small intestine transplantation and pancreatic islet transplantation in the 2000s.

Development of organ transplantation in Korea

Growth of organ transplantation in Korea



Organ transplant-by organ type



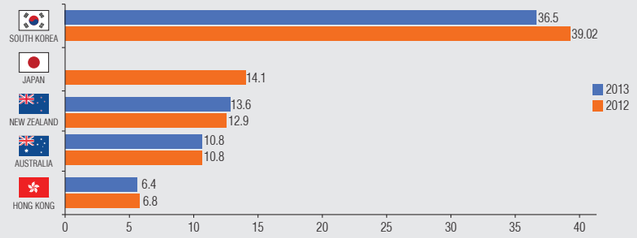
Organ donor trend by living and deceased (2000~ 2013)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Brain death	52	52	36	68	86	91	141	148	256	261	268	368	409	416
DCD	75	104	61	68	84	133	129	122	98	193	128	131	99	80
Living	942	1,381	1,462	1,462	1,552	1,433	1,505	1,465	1,532	1,689	1,780	1,997	2,045	1,920
Total	1,069	1,537	1,559	1,598	1,722	1,657	1,775	1,735	1,886	2,143	2,176	2,496	2,533	2,416

Living donor transplantation in Korea

Since 1996, there have been more than 1,000 solid organ transplantations in Korea per year; since 2001, there have been more than 3,000. In 2014, there were more than 1,200 liver transplants and 1,800 kidney transplants. Today, Korea has the highest number of living donor transplantation operations per million people in any of the Asia-Pacific countries.

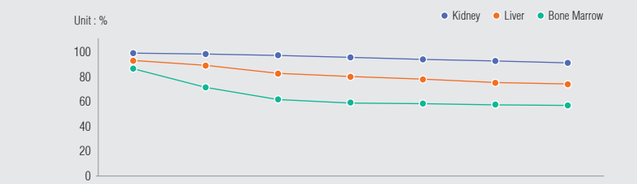
Asia-Oceania Living Organ Donors (2013)



Outcomes of Korean organ transplantation

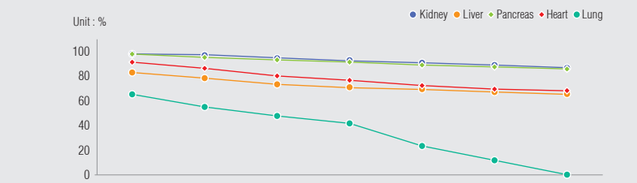
Korea can also boast transplantation outcomes that are superior compared to any country in the world. Particularly in the area of living donor transplantation such as bone marrow, kidney and liver transplantation, Korea shows superb performance.

Recipient survival rate (living donor transplant)



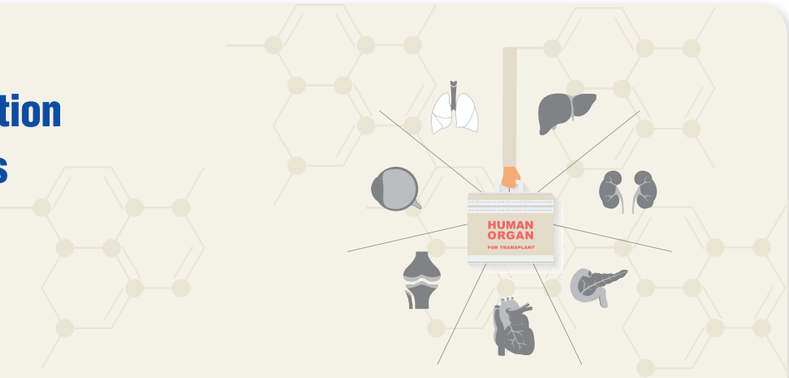
	3mo	1yr	3yr	5yr	7yr	9yr	11yr
kidney	99.11	98.49	97.46	96.3	94.9	93.01	91.26
Liver	93.5	89.05	82.79	80.29	78.08	76.05	74.62
Bone Marrow	86.67	71.49	61.93	59.44	58.41	57.64	57.05

Recipient survival rate (deceased donor transplant)



	3mo	1yr	3yr	5yr	7yr	9yr	11yr
kidney	97.57	96.35	94.18	92.01	89.86	87.71	85.98
Liver	82.61	78.11	72.99	70.29	69.38	67.88	64.94
Pancreas	97.22	95.13	92.78	91.03	88.59	87.56	85.52
Heart	91.05	86.1	79.81	76.29	72.06	69.17	67.86
Lung	65.26	54.22	47.47	41.57	23.01	11.55	–

Organ transplantation and code of ethics



Evaluation and selection of recipients and donors

Patient requiring organ transplantation

1) Perform evaluation on the patient in terms of his or her medical history, past medical history, family history, mental disabilities, drug addiction, capability of regular administration, etc.
2) Perform physical check-up, basic blood tests and radiological examination.
3) Perform additional medical examination to identify autoimmune diseases, malignancies, infections, heart diseases, etc.

Living donor

Perform evaluation on a donor applicant to determine appropriateness as a donor through the review on medical history, physical check-up and several biochemical and radiological tests.

Elderly patients aged over 65

Check the patient's condition to determine whether the transplantation surgery is dangerous to the patient due to various accompanying diseases or whether such surgery will offer better advantages to the patient compared with other treatments in terms of survival.

Strict ethical evaluating process

One of the most important things in living donor transplantation beyond ensuring the safety of the donor is securing the integrity of the donor. Above all, to prevent illegal organ trade, Korea is requiring compliance with a strict approval process pursuant to the Act on Organ Transplantation. Any living donor must have a relationship with the patient of at least first cousin or closer, and the transplantation surgery can be performed only after the verification on the organ(s) to be transplanted along with the final approval from the KONOS(Korea Network for Organ Sharing).

A third party organ donation refers to the donation of organ to a recipient that is kin beyond the first cousin boundary through an applicable transplantation medical institution. In this case, the transplantation surgery is approved only when objective documentary evidence proving that the organ donation is not intended for monetary trade purposes is submitted to and accepted through assessment by KONOS(Korea Network for Organ Sharing).

These regulations and procedures strictly apply not only to Korean citizens but foreign patients visiting Korea to receive organ transplantation.

II

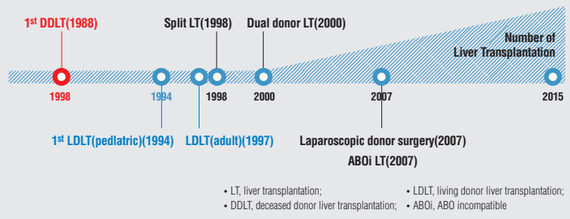
Liver
Transplantation in Korea

II Liver Transplantation in Korea

Why Korea?

Milestones of Korea's liver transplant history

Milestone of the liver transplantation in Korea

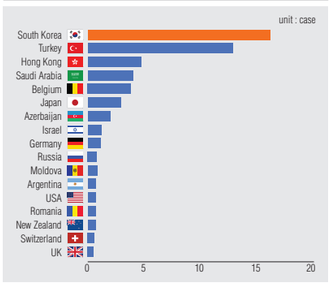


Korea's had its liver transplantation in 1988, when a liver from a brain death patient was donated to a child patient suffering from hepatic insufficiency. Although this was 25 years after the world's first liver transplantation, by Starzl in 1963, Korea's liver transplantation technologies have been evolving quickly. The first living donor liver transplantation in Korea was performed in 1997, just four years after this type of surgery was first performed in 1993 in Japan. Currently, Korea is the world's No. 1 country in the living donor liver transplantation field, with the highest annual number of transplantation surgeries in the world. Korea's first deceased donor split liver transplantation was successfully performed in 1998, and in 1999 a simultaneous liver-kidney transplantation was successfully performed, opening a new era of multi-organ transplantation.

In 2000, Korea succeeded in transplanting livers from 2 living donors to a single patient with hepatic insufficiency, the first surgery of this kind in the world and a milestone in the history of liver transplantation. Korea has been growing to take the leading role in the global living donor liver transplantation field. In particular, Korea has been making great efforts to secure the safety of living donors and minimize surgical wounds to the donor, and achieved success in living donor transplantation using a laparoscope in 2007.

In addition, in 2007 a liver transplantation using a liver donated from an incompatible blood type donor, which had been considered a major obstacle to organ transplantation, was successfully performed in Korea using desensitization therapy. Since then, Korea has performed a number of transplantation surgeries using livers from incompatible blood type donors. According to a report at 2013 World Hepatobiliary Pancreatic Surgery Conference, incompatible blood type donor liver transplantations account for 7.5% of all adult liver transplantation cases surveyed since the year of 2007.

Status of the living donor liver transplantation in the World



Korea's living donor liver transplantations lead the world

Excellent outcomes of liver transplantation in Korea

Korea's liver transplantations show outstanding performance in terms of post-transplantation outcome. The rate of successful liver transplantation in Korea's top 10 liver transplantation specialized hospitals over the past 3 years is 97.6%, significantly higher than any other country around the globe, including the United States. In addition, in terms of survival rate after transplantation, 1 year survival and 3 year survival rates after liver transplantation without liver cancer among patients from the top 10 hospitals in Korea were 94.0% and 90.0%, respectively, for the period from 2011 to 2013. For patients who were subjected to liver transplantation due to liver cancer, the 1 year survival and 3 year survival rates are 92.6% and 86.3%, respectively, which is unparalleled in the world.

Survival rate in the living donor liver transplantation

Survival Rate		Korea*	USA**
LDLT 1yr graft survival rate	Non-HCC	94.0	82.5
	HCC	92.6	
LDLT 3yr graft survival rate	Non-HCC	90.0	72.2
	HCC	86.3	

LDLT : Living donor liver transplantation, HCC : Hepatocellular carcinoma
*Survey of 10 major centers in 2015(LDLT performed between 2011 and 2013)
**USA data from UNOS

Strongly supportive care after liver transplantation

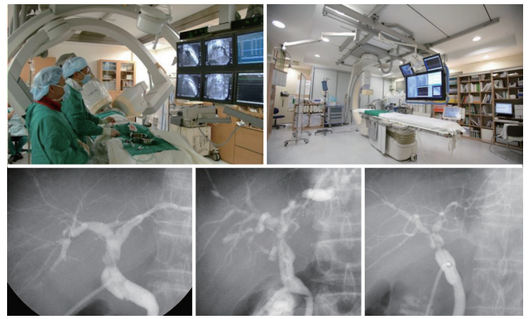
Interventional Radiology

Hospitals in Korea offer a number of advantages, not only in terms of surgery but also for post surgery management. In particular, Korean hospitals distinguish themselves in the treatment of biliary complications, which are among the most frequently observed post-living donor transplantation complications. As medical workers in those Korean hospitals are sufficiently experienced not only in the endoscopic approach but in a wide range of interventional radiology procedures including biliary tract percutaneous approach, they can handle such complications in a safe and effective manner.

Multidisciplinary approach

Korea's liver transplantation teams are comprised not only of internal medicine teams covering gastroenterology, infectious diseases and cardiology, but also cover dedicated transplant anesthesiology, critical care medicine, rehabilitation, nutrition and social projects to provide various kinds assistance to support the fast recovery and rehabilitation of patients

The interventional radiology used cutting edge equipments



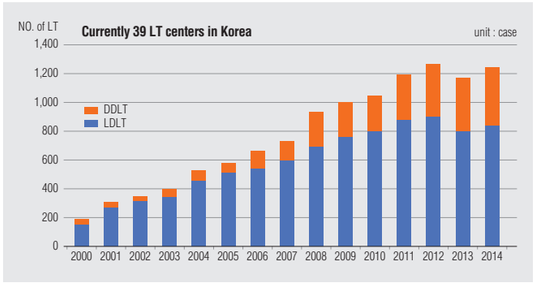
The field of Multidisciplinary approach

Korea has established a systematic foundation for liver transplantation

Foundation of KONOS

As the Act on Organ Donation was initiated and the KONOS (Korean Network for Organ Sharing) was founded in 2000, the government level support and management of organ transplantation commenced. Since the year 2000, when a total of 205 liver transplantation cases were carried out nationwide, liver transplantation in Korea has been growing steadily, reaching a total of 1,259 liver transplantation cases in 2014. Among those liver transplantation cases, living donor liver transplantation accounts for 855 cases, while deceased donor liver transplantation accounts for 404 cases. So far, while living donor liver transplantation accounts for 70% of the total liver transplantation, the proportion of deceased donor liver transplantation is gradually increasing. This increase is attributed to the continual efforts of the medical staff and KONOS to develop and identify more deceased organ donors. Korea has become the leader in the Asian countries in terms of the number of deceased organ donors.

Status of the living donor liver transplantation in the World



In response to the needs of an independent institution for securing more organ donation from deceased donors, KODA (Korea Organ Donation Agency) was founded in 2009 to promote and facilitate the donation of organs from brain death patients and control thereof. Consistent with the increase of liver transplantation, the number of medical institutions providing liver transplantation is increasing every year, and as of 2014, a total of 39 medical institutions are performing liver transplantation surgery.

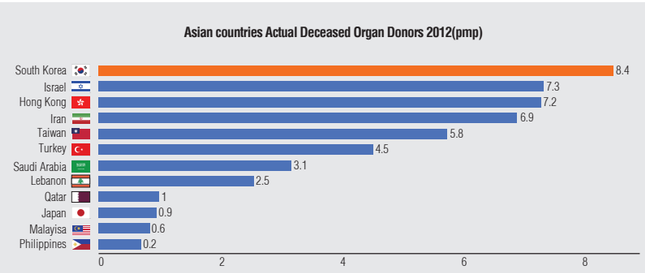
Strict compliance with ethical evaluation process

One of the most important things in living donor transplantation is not only ensuring the safety of the donor but securing the integrity of the donor. Above all, to prevent illegal organ trade, Korea is requiring the compliance with strict approval process pursuant to the Act on Organ Transplantation. Any living donor should be at least the first cousin of the patient and the transplantation surgery can be performed only after the verification on organ(s) to be transplanted along with the final approval from the KONOS. Such regulations and procedures strictly apply not only to Korean citizens but also to foreign patients visiting Korea to receive organ transplantation.

DDLT Backup

According to the IRODAT data reported at CAST held in Japan in 2013, Korea records the largest number of organ donation from brain death patients among Asian countries. According to data from 2011, 8.4 cases of organ donation from brain death patients are observed per million people in Korea. Such organ donation from brain death patients through registration is of great help to provide opportunity of re-transplantation to a patient whose transplanted liver does not work properly due to primary non-function, which is rarely observed in living donor liver transplantation. Support for transplantation of liver from deceased donors for patients subjected to living donor liver transplantation is equally applied to foreign patients according to the relevant laws and regulations.

The Deceased Organ Donors in Asian countries (2012)



THE FACT

❶ The Largest LDLT Program in the World

According to the data from the International Registry in Organ Donation and Transplantation in 2014, 18 patients out of million people in Korea receive living donor liver transplantation surgery, which is the largest number in the world. Such number is over 3 times bigger than that in Japan and Hong Kong where liver transplantation is more generally carried out than any other Asian countries. Even the number recorded in Korea is 10 times bigger compared to the United States. Such figure is not limited to the quantitative meaning, but implies Korea's world's leading technologies in living donor liver transplantation field, backed by accumulated expertise and technical development.

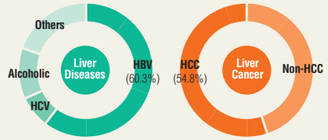
❷ The Best Successful Rate

97.6% Results of analysis on the data from top 10 liver transplantation institutions over the past 3 years have revealed that Korean medical institutions record a liver transplantation success rate of 97.6%, is way higher than the success rate of any country in the world, including the United States and India.

❸ Hepatitis B related cirrhosis / HCC is the Most Common Indication

According to the data from Korea's top 10 liver transplantation institutions for a period from 2010 to 2013, the most frequent indication of liver transplantation was Hepatitis B (1,865 patients, 60.3%) followed by alcoholic liver disease (395 patients, 12.8%) and Hepatitis C (234 patients, 7.6%). Such proportions are similarly observed in the liver transplantation indication patients in other Asian and Middle East countries. As Korea has sufficient experience in liver transplantation with Hepatitis B, it features well-prepared protocol to prevent the recurrence of Hepatitis B after liver transplantation. Recently, through the combined use of HBV immunoglobulin injection and antiviral agent administration, Korea is recording an extremely low rate of Hepatitis B recurrence.

The proportion of patients receiving liver transplantation to cure the liver cancer is relatively high in Korea. Such proportion is continuously growing and has recently surpassed 50% in the total liver transplantation cases operated in Korea. In addition, various efforts to reduce the recurrence of liver cancer after transplantation are being made including pre-liver transplantation treatment on progressive liver cancer to lower the clinical stage.



The cause diseases of liver transplantation

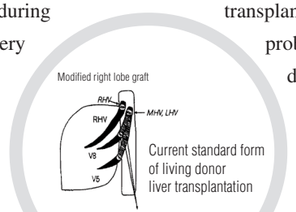
What Korea Does?

Innovations in living donor liver transplantation in Korea

Korea, which holds the dominant position in the world's living donor liver transplantation, has been developing a wide range of surgical technologies related to liver transplantation and a number of such technologies are generally used worldwide in these days.

Modified right lobe graft

Among the technologies developed in Korea, the modified right lobe graft technology used to procure the right lobe of the liver from a living donor is recognized as the standard technique for living donor liver transplantation. This technology has contributed significantly not only to secure the safety of the donor but to increase the survival rate of patient during the transplantation surgery by preventing the small-for-size graft syndrome through the reconstruction of middle hepatic vein to prevent the congestion of the anterior section to the graft.

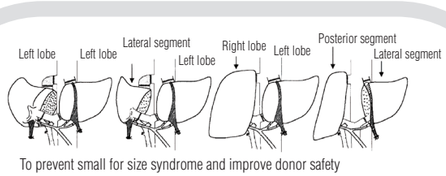


Current standard form of living donor liver transplantation

Dual graft liver transplantation

If the right lobe of the donor's liver is too small to be used as a graft, or on the contrary, if the left lobe of the donor's liver is too small to secure the safety of the donor after transplantation, it is quite embarrassing for the patient requiring liver transplantation. To resolve such problem, Korea has developed a dual graft liver transplantation technique for the first time in the world, which transplants two grafts from two donors into a single recipient.

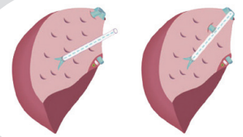
Even Japan, which started the living donor liver transplantation earlier than Korea, has sent its patients requiring dual graft liver transplantation to Korea. This surgical technology is the representation of Korean surgeons with superb dexterity and sincerity who are never frustrated by the limits of reality but make their utmost efforts to overcome such limits.



To prevent small for size syndrome and improve donor safety

Middle hepatic vein reconstruction with PTFE graft (artificial vessel)

When performing liver transplantation, it is required to rebuild the middle hepatic vein (MHV) excluded from the graft so as to ensure the safety of the donor. When rebuilding it, iliac artery or vein procured in advance from a brain death patient is generally used. In reality, as the number of brain death patients is absolutely insufficient, the patient's femoral vein is used alternatively to rebuild the MHV for the donor. However, to use the patient's femoral vein, the patient has to be subjected to not only skin incision but vein procurement in addition to the abdominal incision. To avoid additional surgical process, Korea has developed a technique of rebuilding the MHV using an artificial vein for the first time in the world, which is now generally used worldwide.


Innovative technique to simplify and shorten op procedures and improve donor safety

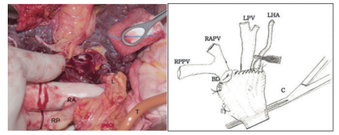
High hilar dissection

As living donor liver transplantation contains small bile duct, 20 to 30% of the patients suffer from biliary complications such as biliary stricture. Such biliary complications are known to be related with the ischemic injury to the bile duct caused by the diminished blood flow at the bile duct anastomosis area. To overcome this, high hilar dissection technique has been developed, which implements bile duct anastomosis without disturbing the surrounding tissues of bile duct as much as possible to minimize biliary complications.

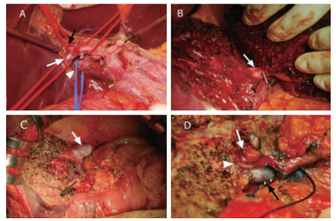
Right posterior graft

Generally, the right lobe is used for the living donor liver transplantation and the left lobe is rarely used in some limited cases. However, if the right liver of the donor is sufficiently large but spare space is insufficient and the recipient does not need to take the entire right lobe of the donor as the recipient's body is small, only the right posterior section of the donor's right liver can be used as the graft. This technique is also developed by Korea, which is significant in terms of the fact that it ensures the safety of a donor with limited spare space by minimizing the liver resection.

Innovative technique to reduce biliary complications



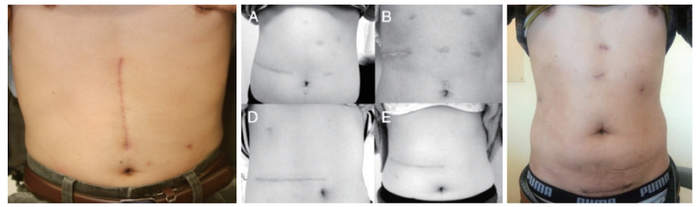
New technique for donor safety(right posterior graft)



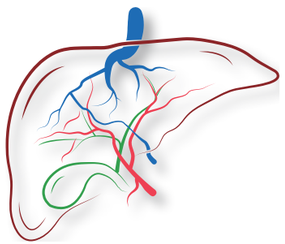
Minimally incisional surgery for living donor

Korea has been working on efforts to minimize the wounds on the donor by grafting various surgical techniques to the living donor liver transplantation surgery. Such efforts include the use of laparoscope to reduce the abdominal incision and liver resection using transverse incision. Recently, Korea has succeeded in the purely laparoscopic donor hepatectomy, which performs the entire process of donor liver resection with the laparoscope.

Various effort to reduce scar



Upper midline | Transverse | Laparoscopic



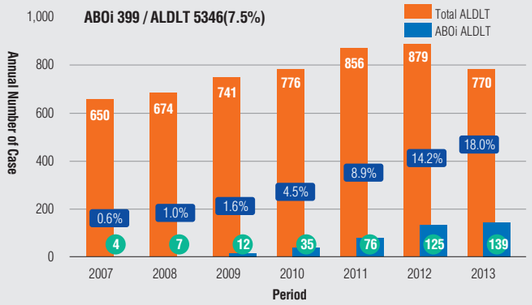
ABO incompatible liver transplantation

In addition to the foregoing technologies, Korea has been working on various attempts not only to secure the safety of donor but to go beyond the limits of donor with its rich experience in living donor liver transplantation. Among such attempts is the incompatible blood type liver transplantation that is generating remarkable results. Incompatible blood type liver transplantation was tried in several ways but failed in Japan and the United States in 1990s. However Korea has achieved success in implementing this technology by performing desensitization through a more simplified way. According to the data recently announced, 18% of the entire adult liver transplantation patients are those who are subject to incompatible blood type liver transplantation.

To complete the incompatible blood type liver transplantation successfully, desensitization therapy such as plasma exchange and injection of Anti-CD20 antibody rituximab is required prior to the transplantation. In some cases, spleen resection and the injection of intravenous immunoglobulin may be required. In these days, the incompatible blood type liver transplantation is carried out without local intravascular injection therapy, which used to be used in the past, to reduce post liver transplantation implications and increase the success rate in a safe manner.

Recently in Korea, over 18% of the entire adult liver transplantation cases are carried out using the incompatible blood type liver transplantation method, and the performance of incompatible blood type liver transplantation is almost equivalent to the compatible blood type liver transplantation, recording a 1 year survival rate and a 3 year survival rate of 92.4% and 87.6%, respectively.

LT made possible between different ABO blood types



Leading in medical education and research

International medical journal publication

Korea's liver transplantation is not limited to the domestic clinical development, but is associated with research and educational activities. In terms of research activities, theses have been continuously listed in international SCI journals, an average of 25 theses over the past 3 years per major liver transplantation medical institution in Korea.

International fellowship program

As the demand of foreigners for learning Korea's liver transplantation technologies increases consistent with the development of Korea's liver transplantation sector, each individual medical institution operates fellowship and educational programs for foreign surgeons. Even more, some Korean medical institutions operate programs that provide financial assistance to those foreign surgeons to facilitate their short/long term training. These institutions provide them opportunities to learn not only surgical techniques but patient management before and after liver transplantation in a comprehensive manner.

International congress

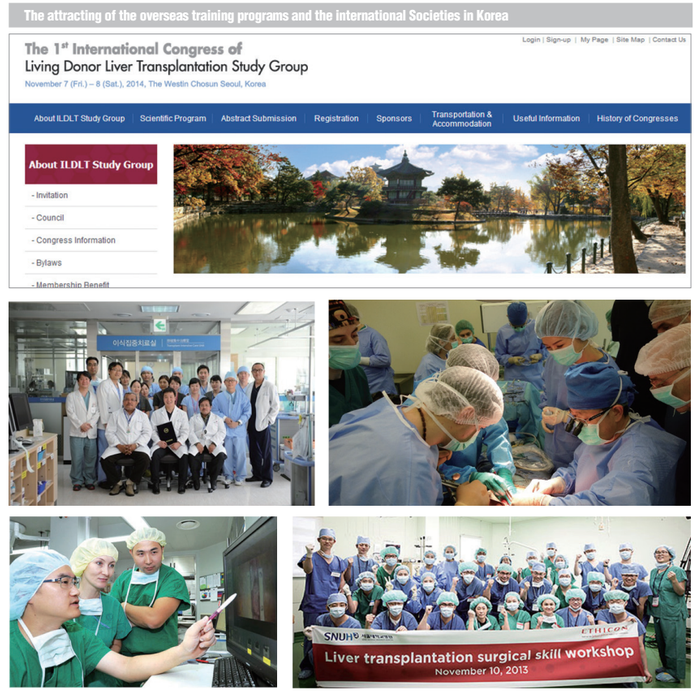
Based on such academic development, Korea has launched a number of international academic conferences related to liver transplantation. CAST (Congress of Asian Society for Transplantation) was held in 2011 and IHPBA (International Hepato-Pancreato-Biliary Association) was held in 2014. ILTS (International Liver Transplantation Society) is scheduled to be held in 2016.

In addition, at the leading position in the living donor liver transplantation, Korea led the establishment of the International Living Donor Liver Transplantation Study Group in 2014 to facilitate the academic exchange and development. At the first conference held in November 2014, 4 medical institutions performed a live living donor liver transplantation session to promote discussions with domestic and overseas attendees.

Fostering new LDLT program around the world

Commensurate with the increased foreign demand for learning Korea's liver transplantation technologies, the number of countries launching a liver transplantation based on what they have learned from Korea is also increasing. When foreign surgeons are launching their liver transplantation program in their countries after completing training in Korea, Korean surgeons are visiting their countries to provide assistance and consulting for patient management after surgery. So far, Korea has provided support for the launch of liver transplantation program in Kazakhstan, Mongolia, Georgia, Egypt, Vietnam, etc. and will provide support for the launch of liver transplantation programs in the Middle East and Southeast Asia.

The attracting of the overseas training programs and the international Societies in Korea



How for Transplantation?

Decision and Selection of Transplant Institute

When the decision is made to receive liver transplantation and to select a domestic transplantation, the transplantation will be prepared through the following.

Pre-transplant counsel

The recipient and the donor submit the following data for evaluation purposes prior to the preparation for the transplantation. It is recommended to submit data that reflect the latest results, if possible, the results within a month.

Recipient examination

Transmit data necessary for the evaluation on the liver transplantation into the recipient.

- Medical records (age, sex, body weight, height, past medical history, previous operation history, complication)
- CT or MRI scans
- Laboratory results (CBC, Routine chemistry, Coagulation profile, AFP, PIVKA-II)

▶Data listed above should be sent via CD or email to perform the evaluation on the adequacy of liver transplantation, which is the very first step of the process.

Donor work-up

Transmit the 1st image data for the judgment of liver donor's adequacy.

- Physical information (age, sex, body weight, height, past medical history)
- CT or MRI scan for volumetry (transmit images for the measurement of liver volume)
- Laboratory results (CBC, Routine chemistry, Coagulation profile)

▶When the adequacy of the recipient is accepted, the adequacy of the donor needs to be determined. At this time, the foregoing data are sufficiently reviewed to determine the donor's adequacy and the most important thing is to secure the safety of the donor.

Pre-arrival preparation

After the adequacy of liver transplantation is judged, several paper jobs are to be done to achieve approval for the liver transplantation. To reduce time taken to complete this process, it is recommended to prepare document requirements in advance before departing the country. Among the following documentary requirements, the official document that proves the kinship (within the first cousin range) between the donor and the recipient is mandatory and this document should be notarized by the embassy of the applicable country to be recognized as an official document.

Other documentary requirements

- Documents required for KONOS approval
- Official document to prove the kinship (within the first cousin boundary) - required to be notarized by the embassy
- Past photograph of the recipient with the donor (required for proving kinship)

Post-arrival process

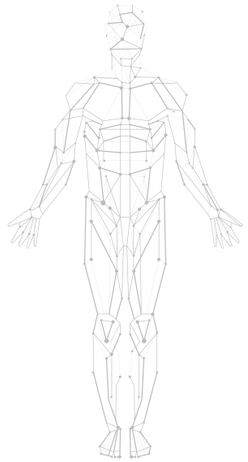
After arriving the transplantation institution, the recipient and the donor are subject to precision medical check-up determined by each institution. Although the detailed check-up list may vary depending on the institution, generally the following examinations are performed.

Recipient work-up prior to surgery

- Cardiac evaluation
- Gastroscopy
- PET-CT (in case of HCC)
- Dental examination
- ENT examination

Donor work-up prior to surgery

- Basic laboratory and X-ray check-up
- Gastroscopy
- Psychiatric evaluation



Post-transplant care

Progress after liver transplantation

Although the period of hospitalization after liver transplantation may vary depending on the hospital, generally the patient is required to be admitted into the hospital for about 2 to 3 weeks after surgery for recovery. In the early stage after discharge, the patient is required to visit the hospital at intervals of 1 or 2 weeks as an outpatient and about 2 months after leaving the hospital, the intervals for visiting the hospital come to be extended to over 1 month. Therefore, the patient is required to stay in Korea for at least 2 months to observe the post-operative progress.
After returning to the homeland country, as the patient is required to be regularly examined at intervals of 1 to 2 months and administered immunosuppressive drug in a strict manner, it is required to identify a hospital that can control liver transplantation patients in the homeland country. If such hospital is not available in the applicable country, the patient should consult his or her doctor in Korea to determine appropriate intervals to visit Korea for examination and prescription.
Especially patients of liver transplantation for Hepatitis B are required to be injected with Hepatitis B antibody (HBIG) at regular intervals to prevent recurrence.

When required to visit the hospital for treatment after liver transplantation

It is not desirable to have rejection reaction or other transplantation complications to such an extent as to ruin your daily life. Most of the patients having liver transplantation would be enough to visit hospital at regular intervals and take medication as prescribed. However any patient showing the following symptom should visit or contact the hospital immediately for appropriate treatment for possible physical abnormality.

- Easily subjected to fatigue or feeling tired
- Fever or chill
- Abdominal pain or oppressive pain
- Grey color excrement
- Dark yellow urine
- Severe pruritus

Infection management

The patient should keep in mind the fact that he or she can be easily infected for the first 6 months due to a large amount of immunosuppressive drug. The patient should avoid the contact with people suffering from communicable diseases such as colds, measles, mumps, chickenpox, tuberculosis, etc. and is recommended to avoid places where a large number of people gather such as theater, station, airport, school, bus, subway, department store, etc. If it is inevitable to visit a place with peoples, it is important to wear a mask and wash hands frequently.

III

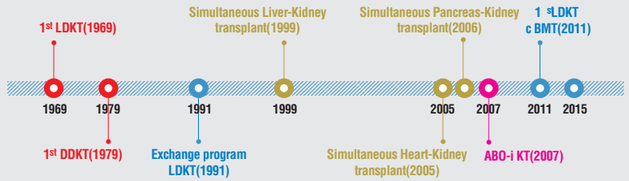
Kidney
Transplantation in Korea

III Kidney Transplantation in Korea

Past and present of Korea's Kidney transplantation

Korea's first kidney transplantation surgery was performed in March 1969 on a patient who was receiving peritoneal dialysis due to chronic renal failure. Although this surgery was 15 years after the world's first kidney transplantation surgery on identical twins by Murray in December 1954, Korea's first kidney transplantation was an achievement in a harsh environment after the Korean War with economic difficulties in which even the basic immunological examination was not available. After then, in January 1979, Korea's first brain deceased kidney transplantation was successfully conducted and 100 additional kidney transplantation operations were conducted by April 1981. Consistent with remarkable development in medical technologies including new immunosuppressive drugs and state-of-the-art diagnostic techniques, the survival rate of kidney transplantation patients have been significantly improved. Currently, over 1,800 cases of kidney transplantation are performed in Korea every year.

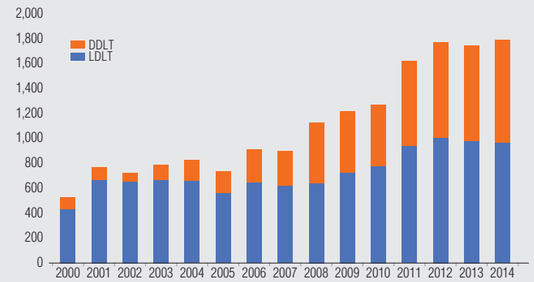
Milestones of Korean kidney transplantation history



Increasing number of Korean kidney transplantation

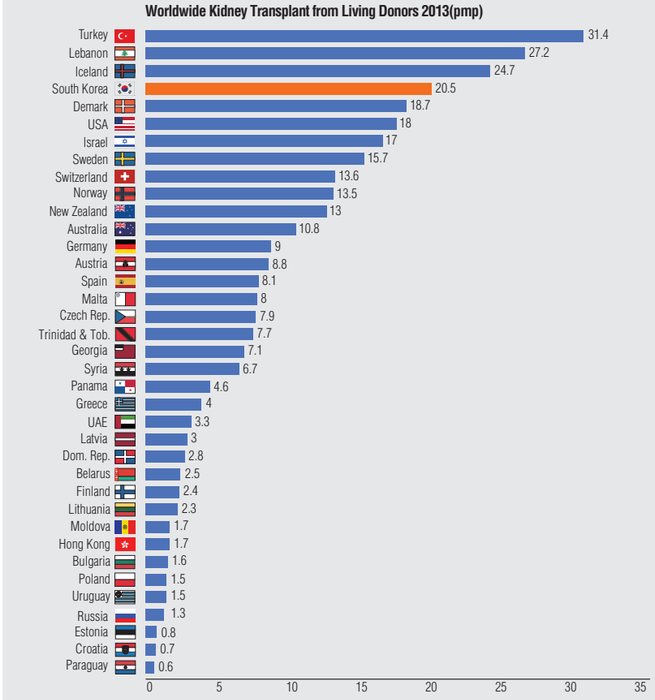
Upon the enactment of Act on Organ Transplantation and the launch of KONOS (Korean network for organ sharing), the number of deceased organ donors has come to increase, resulting in the general public's better understanding in and development of Korea's kidney transplantation. Kidney transplantation in Korea has been continuously growing and the number of kidney transplantation operations increased from 682 in 2000 (557 cases of living donor transplantation and 125 cases of deceased donor transplantation) to 1,808 in 2014 (1,000 cases of living donor transplantation and 808 cases of deceased donor transplantation). In addition, a total of over 60 medical institutions are providing kidney transplantation surgery.

Milestones of Korean kidney transplantation history



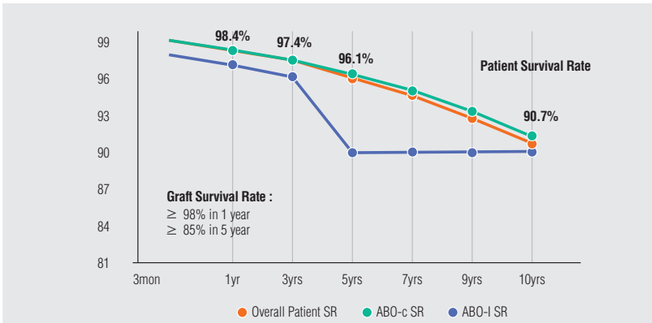
According to the data from the site (http://www.irodat.org) in 2014, Korea performs the largest number of living donor transplantation operations per million people among Asia-Pacific countries. Korea also records the largest number of living donor kidney transplantation in Asia-Pacific countries and ranks 4th in terms of the number of living donor kidney transplantation per million people worldwide.

Living donor kidney transplantation in Korea



Excellence of Korea in kidney transplantation

The performance in patient's progress after kidney transplantation is unparalleled in the world. The 1 year, 3 year, 5 year and 10 year survival of living donor kidney transplantation patients is 98.4%, 97.4%, 96.1% and 90.7% respectively, and these figures are similarly observed in incompatible blood type kidney transplantation as well.



Innovations in living donor kidney transplantation

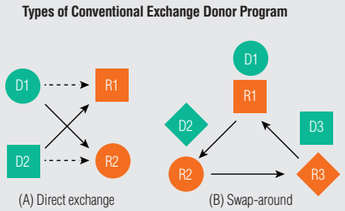
Korea's kidney transplantation has overcome a number of obstacles and difficulties and is still making a lot of efforts to achieve development.

Exchange living donor kidney transplantation

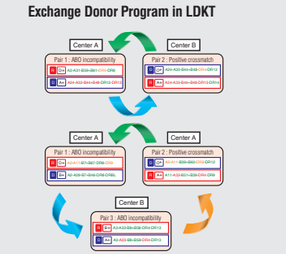
Since 1990, Korea has been operating an exchange transplantation program as a part of efforts to overcome the shortage of organs donated, and some hospitals are operating a web-based algorithm program to perform exchange transplantation.

Anti-HLA antibody positive kidney transplantation

Korea has been performing transplantation successfully even when donor specific antibodies against the HLA antigen exist in the serum of the recipient. The reasons why to perform transplantation surgery in combination with the desensitization treatment despite the fact that the survival rate is relatively low and antibody-mediated rejection is frequently observed compared to the patients with no donor specific antibody and who is negative to the exchange test, are first, it is impractical for highly sensitized patients to find appropriate donor who shows negative results from the exchange test, second even if the survival rate is relatively lower as stated above, such survival rate can be said significant when comparing with the patients who are waiting for deceased donors who show negative results in the exchange test or patients who keep receiving dialysis treatment. The recently announced results on the performance of kidney transplantation on patients who are positive to anti-HLA antibody over the past 3 years in Korea have revealed that 3 year survival of such patients is over 90% and the rate of patients experiencing acute rejection is approximately 20%.



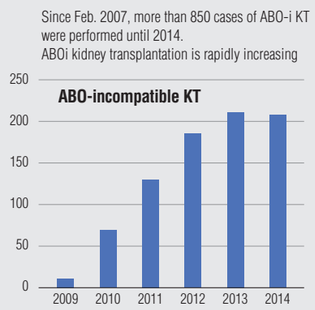
In Korea, the first exchange donor(swap) program between two families was performed in 1991 and multipair donor kidney exchange by a web-based algorithm started in 2005.



Schematic representation of multipair donor kidney exchange.

ABO-incompatible kidney transplantation

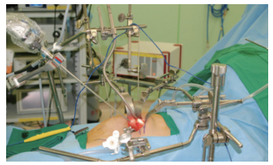
Since the introduction of desensitization therapy that can remove anti-ABO antibodies prior to transplantation in February 2007, Korea has been performing incompatible blood type kidney transplantation successfully and as of the end of 2014, a total of 859 cases of incompatible blood type kidney transplantation have been successfully completed, accounting for 20% of the living donor kidney transplantation. In addition, the 5 year survival rate of such patients exceeds 90%, which is almost equivalent to that of compatible blood type kidney transplantation patients.



Laparoscopic donor nephrectomy and Video-assisted minilaparotomy surgery (VAMS)

Many transplantation hospitals in Korea are using laparoscope to extract the kidney from the donor, and this technique delivers outstanding performance in the post-surgery recovery of donor and less complications.

Video-assisted minilaparotomy surgery is a hybrid of laparoscopic and open surgical techniques. Video- assisted minilaparotomy living-donor nephrectomy combines the benefits of both laparoscopic technique and open technique. Its complication rate and duration of surgery are similar to those of open surgery and its excellent outcomes for postsurgical pain, time to postoperative recovery, and cosmetics are well established. Its postsurgical complication rates have also been reported to be as low as those seen with laparoscopic donor nephrectomy.



Strongly supportive care after kidney transplantation

Immunosuppressive therapy

The use of immunosuppressive agent is the key factor in kidney transplantation. The Immunosuppressive agent is administered simultaneously with the transplantation surgery, and the patient has to take the immunosuppressive drug for the rest of his or her life as far as the kidney transplanted works its function.

Induction immunosuppression

The purpose of induction immunosuppression is to prevent the acute rejection that may occur from the patient in the early stage after the transplantation when the immune response occurs the most severely as strong immunosuppressive agent is used in this period.
Although induction immunosuppression protocol varies depending on the medical center, most hospitals use IL (Interleukin)-2 receptor monoclonal antibody basiliximab (Simulect®) or daclizumab (Zenapax®) as induction immunosuppressive for patients with lower possibility of non-sensitized rejection. In case of highly sensitized patients, in other words, patients with higher possibility of rejection, anti-lymphocyte polyclonal antibody Thymoglobulin®(rabbit antithymocyte globulin) or Atgam®(equine antithymocyte globulin) are generally used.

Maintenance immunosuppression

Maintenance immunosuppression is intended to prevent the rejection and minimize the side effect of immunosuppressive drug on a long term basis. Detailed maintenance immunosuppression therapy varies depending on the medical institution, most hospitals use 3 agent therapy which is comprised of calcineurin inhibitor tacrolimus or cyclosporine, lymphocyte proliferation inhibitor mycophenolate mofetil (Cellcept®) or mycophenolic acid (Myfortic®) or azathioprine, and steroid.

Management of complications after surgery

In terms of management after kidney transplantation, Korean hospitals feature various advantages and merits. They are handling patients with surgical implications safely through highly advanced interventional radiology.

Collaborative treatment and operation

In addition, Korean hospitals provides a wide range of support in collaboration with multiple medical departments including transplantation surgery department, renal department, dedicated transplant anesthesiology, critical care medicine, nutrition team and social project team to ensure fast recovery of the patient.

Leading in medical education and research

Korea's kidney transplantation is not limited to the domestic clinical development, but is associated with research and educational activities. In terms of research activities, theses have been continuously listed in international SCI journals. As the demand of foreigners for learning Korea's kidney transplantation technologies increases consistent with the development of Korea's kidney transplantation sector, each individual medical institution operates fellowship and educational programs for foreign surgeons. Even more, some Korean medical institutions operate programs that provide financial assistance to those foreign surgeons to facilitate their short/long term training. These institutions provide them opportunities to learn not only surgical techniques but patient management before and after kidney transplantation in a comprehensive manner.

Decision and Selection of Transplant Institute

Evaluation and selection of recipient and donor of kidney

Chronic kidney disease patients wants to have kidney transplantation, evaluation on him or her is to be performed first in terms of the medical history, past medical history, family history, mental disabilities, drug addiction, capability of regular administration, etc. When the patient is accepted as a recipient, basic physical check-up, blood test and urine test are performed. Depending on the disease the patient is suffering from additional examination may be carried out to identify autoimmune diseases, malignancies, infections, heart diseases, etc.

Although there is no absolute age limits, patients aged over 65 are subject to verification on whether the kidney transplantation surgery may cause risks to the patient due to various accompanying diseases or whether transplantation surgery is obviously advantageous to the patient compared to the dialysis therapy.

Even the living kidney donor applicant is subject to review on medical history, physical check-up, biochemical tests and radiological examinations to judge the adequacy as a donor. As the safety of the donor is the first priority, additional precision examination may be performed where necessary.

Generally, a donor should be a healthy adult aged 20 to 65 and should be a voluntary donor. In addition, a donor should have no problem with his or her kidney in the anatomical and functional aspects and should have no diabetes, severe hypertension, infection, malignancy, etc.

Transplantation immunity tests

To prevent and diagnose rejection after transplantation, several immunity tests are required before and after the transplantation. ABO blood antibody test, human leukocyte antigen (HLA) test and HLA antibody test are the key transplantation immunity tests. It is essential to check whether antibodies that react to the donor's ABO blood antigen or HLA antigen exist in the serum of the recipient before the transplantation surgery because such antibodies may cause hyperacute rejection or early kidney function loss.

Pre-arrival preparation

After the adequacy of kidney transplantation is judged, several paper jobs are to be done to achieve approval for the kidney transplantation. To reduce time taken to complete this process, it is recommended to prepare document requirements in advance before departure. Among the following documentary requirements, the official document that proves the kinship (within the first cousin range) between the donor and the recipient is mandatory and this document should be notarized by the embassy of the applicable country to be recognized as an official document.

Other documentary requirements

- Documents required for KONOS approval
- Official document to prove the kinship (within the first cousin boundary) - required to be notarized by the embassy
- Past photograph of the recipient with the donor (required for proving kinship)

Post-arrival process

After arrival at the transplantation institution, the recipient and the donor are subject to precision medical check-up prescribed by each institution. Although the detailed check-up list may vary depending on the institution, generally the following examinations are performed.

Recipient work-up prior to surgery

- Cardiac evaluation
- Gastroscopy
- Dental examination
- ENT examination

Recipient work-up prior to surgery

- Basic laboratory and X-ray check-up
- Gastroscopy
- Psychiatric evaluation

Post-transplant care

Progress after kidney transplantation

Although the hospitalization duration after kidney transplantation may vary depending on the hospital, generally the patient is required to be admitted into the hospital for about 1 to 2 weeks after surgery for recovery. In the early stage after leaving the hospital, the patient is required to visit the hospital at intervals of 1 or 2 weeks as an outpatient and about 3 2 months after leaving the hospital, the intervals for visiting the hospital come to be extended to over 1 month. Therefore, the patient is required to stay in Korea for at least 2 months to observe the after-surgery progress.

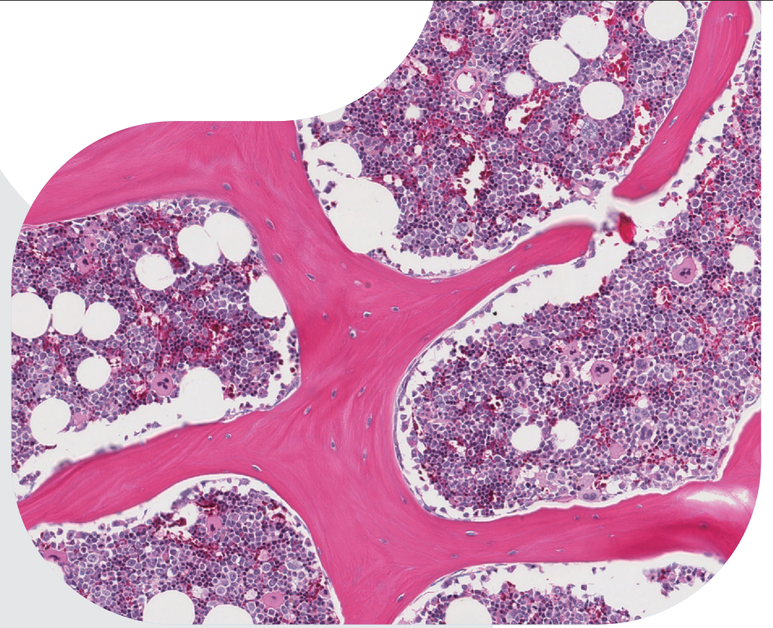
After returning to their homeland, as the patient is required to be regularly examined at intervals of 1 to 2 months and administered immunosuppressive drug in a strict manner, it is required to identify a hospital that can control kidney transplantation patients in the homeland. If such hospital is not available in the applicable country, the patient should consult his or her doctor in Korea to determine appropriate intervals to visit Korea for examination and prescription.

When required to visit the hospital for treatment after kidney transplantation

It is not desirable to have rejection reaction or other transplantation complications to such an extent as to ruin your daily life. Most of the patients having kidney transplantation would be enough to visit hospital at regular intervals and take medication as prescribed. However any patient showing the following symptom should visit or contact the hospital immediately for appropriate treatment for possible physical abnormality.

- Fever or chill
- Pain or oppressive pain in the transplantation area
- Significant reduction in the amount of urine or hematuria
- Pain or severe odor during urination or frequent inclination for urination
- Blood pressure increase or abnormal weight increase or continuous edema

When the patient visits the hospital for above symptoms or renal dysfunction, the patient may be subject to biopsy where necessary (biopsy of the kidney transplanted can perform the key role in detection of rejection and, nephrotoxic by immunosuppressive drug and acute renal failure by acute tubular necrosis).



Ⅳ

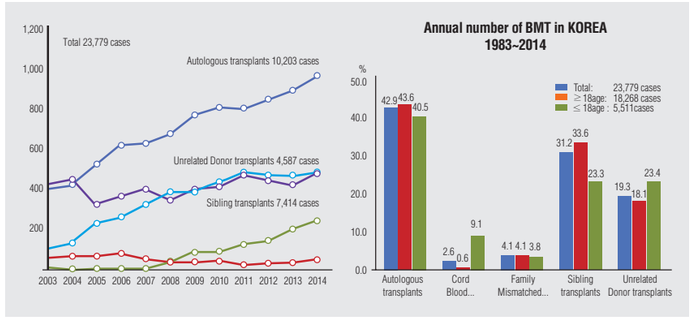
Bone Marrow Transplantation in Korea

IV Bone Marrow Transplantation in Korea

Hematopoietic Stem Cell Transplantation

Milestones of Korean Bone Marrow transplantation history

Korea's history of hematopoietic stem cell transplantation started with its first allogeneic hematopoietic stem cell transplant for a patient with acute lymphoblastic leukemia in 1983. Currently, Korea is performing all types of hematopoietic stem cell transplants, including autologous stem cell transplantation (first performed in 1985), hematopoietic stem cell transplantation from an unrelated donor (first performed in 1995), cord blood stem cell transplantation (first performed in 1996), reduced intensity conditioning stem cell transplantation (first performed in 1998) and haploidentical stem cell transplantation (first performed in 2001).

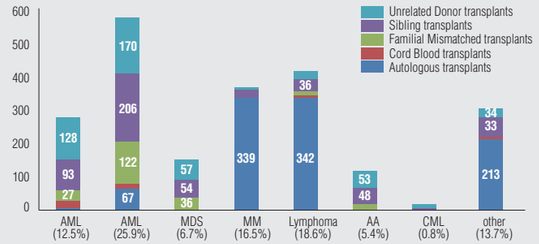


With a growing number of patients needing hematopoietic stem cell transplantation, transplant operations for diseases that are rarely observed in Korea but are widely observed in foreign countries, hemoglobin disorders in particular, are growing as a result. For example, Korea performed a transplant for thalassemia in the Middle East in 2012.

Since Korea's first successful hematopoietic stem cell transplantation in 1983, more than 23,000 hematopoietic stem cell transplants have been performed so far, with a total of 2,234 hematopoietic stem cell transplants performed in Korea during 2014.

Increasing number of Bone Marrow transplantation in Korea

The number of hematopoietic stem cell transplants in Korea has been growing continuously since the first successful surgery in 1983, with 1,898 cases in 2011, 1,930 cases in 2012, 2,009 cases in 2013 and 2,234 cases in 2014. Of these, the most frequent type was autologous hematopoietic stem cell transplantation, which was performed 966 times, while the number of sibling transplantation cases performed was equivalent to that of cases of transplantation from an unrelated donor.



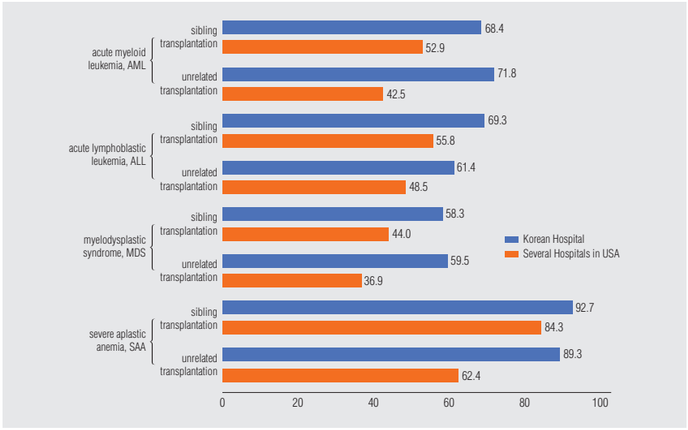
By disease, acute myeloid leukemia patients are observed the most frequently, and a total of more than 600 transplants for this disease were performed in 2014, followed by malignant lymphoma, multiple myeloma, acute lymphoblastic leukemia and myelodysplastic syndromes. As stated above, the popularity of hematopoietic stem cell transplantation is growing continuously, and more importantly, not only is the number of transplant operations growing, but so is the scope of their application. Recently, Korea has achieved success in transplantation for diseases that are no longer observed in Korea, such as halassemia or sickle cell anemia. In addition to these diseases, Korea is successfully performing transplantation surgeries for rare diseases, such as inherited disorders of metabolism and hemophagocytic lymphohistiocytosis, delivering excellent performance in both quantitative and qualitative terms.

Remarkable Outcome of Bone Marrow Transplantation in Korea

Looking at the 2014 survival rates of patients who received transplantation surgery from 2011 to 2013 at Korea's major bone marrow transplantation centers, the 100-day survival rate, 1-year survival rate and 3-year survival rate were 82.9 to 93.2%, 60.5 to 85.0% and 50.0 to 75.0%, respectively, a relatively outstanding performance.

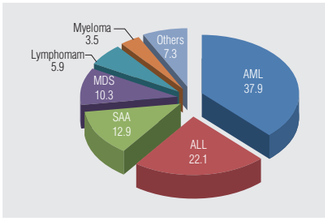
The survival rate of hematopoietic stem cell transplantation patients varies depending not only on the disease that the patient is suffering from but also on the type of transplantation, such as autologous transplantation, sibling transplantation or transplantation from an unrelated donor. However, Korea shows relatively low deviation in terms of survival rate, with outstanding performance compared not only to the other Asian countries, but to any country in the world.

In terms of the distribution of diseases of patients who have been treated at major hematopoietic stem cell transplantation centers in Korea from 2011 to 2013, AML (acute myeloid leukemia) accounted for the highest proportion at 37.9%, followed by ALL (acute lymphoblastic leukemia) at 22.1% and SAA (severe aplastic anemia) at 12.9%.

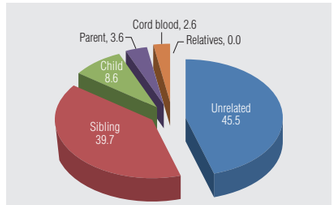


(Source : Korea Health Industry Development Institute, 2015)

Distribution of diseases in major BMT centers(2011-2013)



The type of BMT in major BMT centers(2011-2013)



(Source : Korea Health Industry Development Institute, 2015)

The Survival rate of Bone Marrow Transplantation(2011-2013)

Survival Rate	Major BMT Centers of Korea
100 days	82.9% ~ 93.2%
1 year	60.5% ~ 85.0%
3 years	50.0% ~ 75.0%

(Source : Korea Health Industry Development Institute, 2015)

Strength of Bone Marrow Transplantation in Korea

Hematopoietic stem cell transplantation started to be performed in 1957 for experimental purposes, and was launched in earnest in the late 1970s. Hematopoietic stem cell transplantation was launched in Korea in 1983, a relatively early stage in worldwide terms, and Korea now has more than 30 years of accumulated knowledge and experience in this field, which has enabled it to achieve transplantation performance that is equivalent to or even better than the world's most advanced economies. Critically, it can be said that this outstanding transplantation performance is the result of Korea having pursued hematopoietic stem cell transplantation in a concentrated manner. Although there are more than 40 medical institutions across Korea that can perform hematopoietic stem cell transplantation, most of the transplants are performed by Korea's top medical institutions, which carry out 100 to 500 transplantation surgeries per year. This high concentration of Korea's manpower in the transplantation field has enabled medical staff of those major medical institutions to build a high level of expertise in transplantation, leading to the accumulation of experience and the expansion of knowledge on a long-term basis.

The next factor that explains Korea's outstanding performance in the transplant field is the fact that Korea's medical staff ensures continuity of treatment. In some advanced countries, it is generally observed that the top medical doctors are no longer involved in actual medical treatment, and instead dedicate themselves to research. But in Korea, medical staffs generally continue to treat patients even after they are engaged in research activities, which ensure not only the continuity of treatment but continuous care for patients.

The experienced nursing staff dedicated to hematopoietic stem cell transplantation, an optimized treatment assistance program and a well-organized treatment support system that includes collaborative treatment can be highlighted as the third factor. As most of the medical institutions in Korea carrying out hematopoietic stem cell transplantation are operated by a hematopoietic stem cell transplantation center configuration system, the related clinical departments, such as division of infectious diseases, division of pulmonology, laboratory medicine, radiology medicine and nuclear medicine, are operating an organically collaborative treatment system. This type of centralized system has enabled nursing staff to become more highly skilled and specialized, and has contributed to the improvement of safety and therapeutics in the transplantation process. In addition, various treatment assistance programs including a patient nutrition improvement program and rehabilitation are being promoted.

Fourth, the medical expenses for hematopoietic stem cell transplantation in Korea are very reasonable. The charge for medical treatment is priced relatively low due to various factors, and therefore, the medical expenses related to hematopoietic stem cell transplantation are also cheaper than in other advanced countries. So, the medical fee for a foreign patient visiting Korea to receive hematopoietic stem cell transplantation is only one half to a third of the medical fee for hematopoietic stem cell transplantation in advanced countries. In other words, patients can receive medical services in Korea which are equivalent to or even better than those in advanced countries, at a much lower cost.

Strongly supportive care after Bone Marrow Transplantation

Supportive care after hematopoietic stem cell transplantation, particularly after sibling transplantation, is critical. As the pretreatment therapy performed at the time of transplantation includes high dose chemotherapy or total body irradiation, immune removal inevitably occurs and immune reproduction and reconfiguration by the stem cells injected follows, which will cause immune deterioration for a certain period of time.

For this reason, the patient becomes vulnerable to infection. As the quickest and the most common symptom is fever, it is important to pay attention to fever and check the body temperature frequently.

Recovery of the immune function can take 6 months to over 1 year depending on the type of hematopoietic stem cell transplantation. In addition, to prevent infection, post-BMT care is more important than anything else.

Hematopoietic stem cell transplantation centers in Korea incorporate not only blood physicians but a collaboration team comprised of the division of infectious diseases and the division of pulmonology, the nutrition team, nursing staff and other treatment assistance personnel to take care of patients in this phase so as to ensure safer and more efficient patient care.

In addition to infection, the other major complications after hematopoietic stem cell transplantation are graft-versus-host diseases. Graft-versus-host diseases, which are caused when immune cells from the stem cells engrafted after transplantation attack the healthy tissues of the patient, generally penetrate into the skin, gastrointestinal and hepatobiliary system, but in principle, it can develop in all of the tissues in the body, which means that special attention is required. If any suspicious symptoms appear, it is necessary to consult a specialized doctor.

How for Bone Marrow Transplantation?

Donor appropriate for sibling hematopoietic stem cell transplantation

A stem cell donor for sibling hematopoietic stem cell transplantation should be a donor with 100% matching transgene (usually a sibling), a family member donor with a non-matching transgene (siblings, parents) or an unrelated donor (with 100% matching transgene or at least 6 out of 8 matching genes). Cord blood can also be used in some cases.

Stem cells are collected either directly from the marrow under anesthesia, or a way that is similar to blood donation after injecting granulocyte colony stimulating factor (G-CSF). As the former method is almost never used these days to avoid the risk of general anesthesia, it is possible for anyone to donate stem cells with the exception of patients with heart disease, lung disease, kidney disease, or cancer.

It is possible to be a donor even if the blood type does not match, and even a patient with chronic hepatitis such as hepatitis B or C can receive a transplantation after being administered antivirals prior to transplantation. Even AIDS patients with non-active disease can be donors if the disease can be controlled through the administration of a sufficient amount of antivirals.

In conclusion, donor adequacy is determined based on the level of the transplantation-associated or transplantation-relevant genes and the severity of the donor's disease, if applicable.

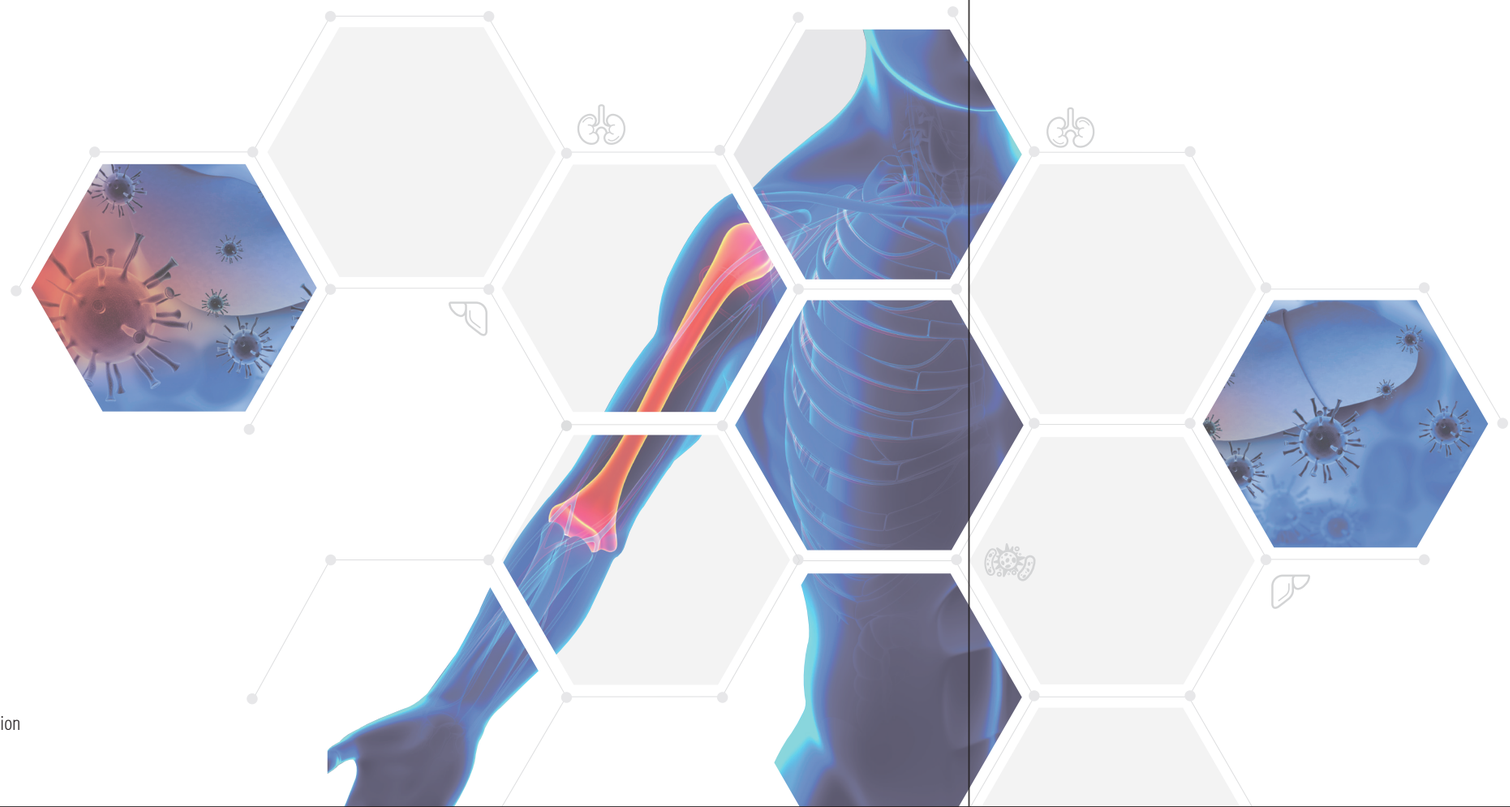
Medical examination required in Korea before transplantation

As the donor adequacy is determined based on the level of the transplantation-associated or relevant genes match and the severity of the donor's disease, if applicable, it is necessary to check the match level of the transplantation-associated or relevant genes gene first, and then to administer antivirals depending on the presence of a viral disease such as hepatitis, if applicable.

Required examination for patient prior to transplantation and transplantation procedures

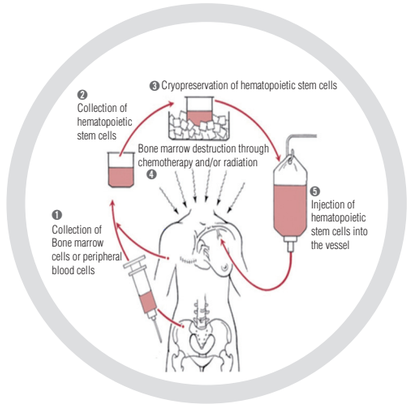
To determine the adequacy of the donor prior to transplantation, tests for diseases that may deteriorate under an immunosuppressive state after transplantation such as hepatitis virus test (type A, B or C), HIV test, cytomegalovirus antibody test, etc. are performed. In addition, tests to identify any disease that may cause infection after transplantation will be performed through dental and otolaryngology examination. Most of all, examination on the 8 transplantation-associated or transplantation-relevant genes will be performed to reaffirm a donor that is suitable for transplantation. If a suitable donor is identified through such tests, transplantation will proceed and particularly in cases of blood cancers such as leukemia, lymphoma, etc. it is most important to check whether the disease has shown a complete remission condition or a partial response through the previous treatment. If such a state has not been reached, the prognosis after transplantation is likely to be poor, and additional chemotherapy will be required.

In cases of aplastic anemia, thalassemia or non-blood cancers such as sickle cell anemia, it is possible to proceed directly to the transplantation-associated or transplantation -relevant genes.



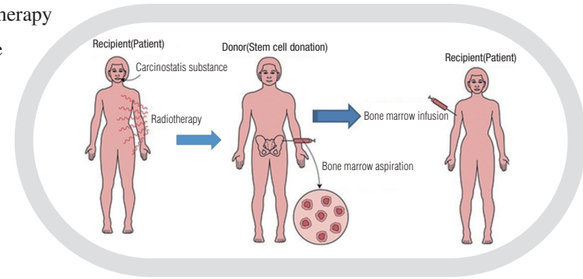
Procedures for autologous hematopoietic stem cell transplantation

Autologous hematopoietic stem cell transplantation is a method that involves performing high dose chemotherapy to treat a cancer for which chemotherapy is effective. It is a method that aims to recover the normal hematogenous function by injecting the patient's hematopoietic stem cells which are cryopreserved in advance in preparation for a situation in which normal blood cells are not recovered after killing possible residual cancer cells by injecting high-dose chemotherapy or irradiation, which is intended to overcome the side effects of chemotherapy.



Procedures for sibling hematopoietic stem cell transplantation

To ensure the safety of transplantation, a central venous catheterization is inserted, then chemotherapy or systemic radiation therapy is applied to remove residual cancer cells in cases of blood cancer. Hematopoietic stem cells originating will be injected into the patient. Hematopoietic stem cells will be infused via the patient's central venous catheterization and the infused stem cells will be headed for the marrow through a process called homing, which consequently create new blood cells after engraftment.



V

International Patients Story
in Korea

V International Patients Story in Korea

1. Foreign patients visiting Korea

The number of foreign patients visiting Medical Korea has been growing continuously since 2009. A total of 270,000 foreign patients (excluding duplicate visits) visited Medical Korea during the year of 2014. The annual number of foreign patients in 2014 was 820,000, with a growing number of patients seeking hospitalization for the treatment of severe illness. Among those with severe illnesses, cancer patients represented the largest proportion, followed by heart disease patients. Of the heart disease patients, ischemic heart disease patients account for the highest number. More foreign patients are visiting Korea for congenital heart disease treatment, especially from Russia and Mongolia.

The number of international patients(2009-2014)

Classification	2009	2010	2011	2012	2013	2014
The excluded number of re-visited/re-admitted patients	60,201	81,789	122,297	159,464	211,218	266,501
The total number of man-days	162,638	224,260	344,407	474,939	650,411	816,691

(Source : Korea Health Industry Development Institute, 2015)

The number of international patients with major severe diseases(2010-2014)

Classification	2010	2011	2012	2013	2014
Cancer	1,525	2,293	3,767	5,604	5,565
Heart disease	1,101	1,759	2,736	3,717	3,044
Cerebrovascular disease	675	1,006	1,571	2,050	1,910
Severe burn	68	100	150	226	244

(Source : Korea Health Industry Development Institute, 2015)

Recently, more patients are visiting Korea for transplantation surgery. In particular, the number of foreign patients visiting Korea for liver transplantation to treat liver cancer increased more than 4 times in 2014 compared to 2010, and the number of foreign patients was visiting Korea with kidney diseases such as renal failure increased approximately 5-fold. In addition, the number of foreign patients visiting Korea requiring marrow transplantation for leukemia has increased more than 5 times compared to 2010. Generally, when a foreign patient visits Korea for transplantation surgery, he or she is accompanied by the donor, and Korean doctors take both the health of the patient receiving transplantation and the quick recovery of the donor very seriously.

Distribution of international patients with major diseases

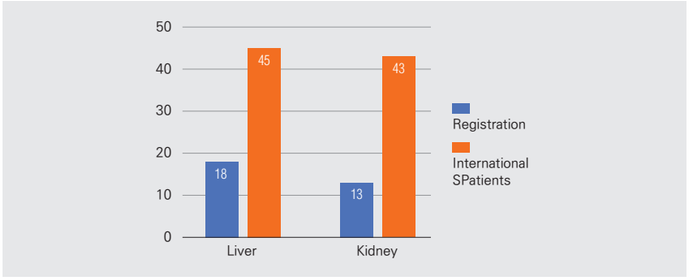
Classification	2010	2011	2012	2013	2014
Liver diseases (K70-K77, C22, Q44, B15, B17)	386	644	1,006	1,340	1,631
Kidney diseases(Renal failure, etc.) (N17-N19, N25-N29, C64-C68, Q27, Q60-Q64)	171	275	411	552	789
Disorders of blood and blood-forming organs(Leukemia, etc.) (C81-C96, D46, D56-57, D59, D61, D72, D74, D75, D78-D79, E85)	81	120	168	262	409

(Source : Korea Health Industry Development Institute, 2015)

2. Foreign patients receiving transplantation in Korea

1) Treatment Status

According to Korean Network For Organ Sharing (KONOS), the number of foreign patients receiving kidney or liver transplants in medical institutions in Korea in the period from 2013 to 2014 was 63 (18 foreign residents) and 56 (13 foreign residents), respectively. As you can see, the number of foreign patients visiting Korea is over 3 times greater than the number of foreign residents of Korea who are patients.

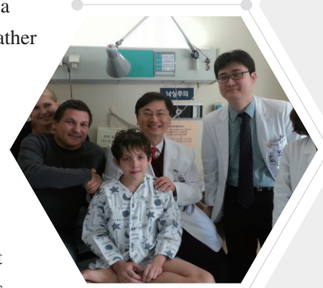


(Source : KONOS, 2015)

2) Treatment Cases

A Russian boy visited Korea for treatment of acute renal failure

A Russian boy who visited Korea in 2013 for treatment of acute renal failure had been receiving dialysis treatment and seeking a hospital where he could receive a kidney transplant within Russia. But as a kidney transplant in Russia was impractical, he came to visit Korea following the recommendation of a colleague of his father, who worked in a Korea branch. However, his health was too poor to receive the transplant, so he had to wait. After vicissitudes, the boy was transplanted with a kidney from his father (living donor kidney transplantation) and recovered his health. He is now living well in Russia, without any complications.



End-stage renal failure patient from the UAE who had been refused a kidney transplant for heart disease smiles again in Korea

A patient from the UAE (59 years) who had received a coronary artery bypass graft and coronary intervention due to ischemic heart disease visited China for a kidney transplant but was refused due to his heart disease, and then came to visit Korea in the winter of 2013 via a military hospital in the UAE. In February 2014, after 4 hours of major surgery, he was successfully transplanted with a kidney from his son. He is currently living in his own country, and is in good health.

Successful living donor liver transplant despite a blood type mismatch

A 50-year-old male from New Zealand who had been working in Korea as an English teacher desperately needed a living donor transplantation due to his alcoholic liver disease. Although his brother living in New Zealand was tested for donor adequacy, the blood type of his brother was RH +O/, which didn't match the patient's blood type of RH -O. However, as Korea had sufficient experience in living donor transplantation in a condition of blood type mismatch, it was not that big a deal to perform the surgery. The donor returned to his country 3 weeks after the surgery, and the recipient returned to work after 3 months.

Patient from Abu Dhabi who was transferred from a US-based hospital undergoes successful kidney transplant in Korea

A 35 year old male patient with a severe lack of kidney function due to pediatric diabetes, frequent hemodialysis and blood transfusion visited the United States, but was diagnosed as a poor candidate for a transplant due to the high risk of rejection. Eventually, he visited Korea where he received a desensitization treatment to reduce the risk of rejection after surgery. A kidney transplant from his brother was a success, and he was able to return to good health. After the surgery, he commented, “I was really disappointed when the hospital in the United States told me that they wouldn’t perform a kidney transplant. But I didn’t worry that much, as I had heard that Korea had the world’s leading technologies in organ transplantation. I am truly amazed by Korea’s advanced medical technologies.”

7-year-old boy from UAE returns home to his country in good health after a marrow transplant in Korea

Above patient arrived in Korea on January 19, 2015 and was seen in the Department of Pediatrics, Division of Hematology, BMT center as an outpatient on January 20, 2015. He underwent pre-BMT work-ups during his hospitalization from January 20th to 21st. He was confirmed to be complete match for HLA-A, B, C, DR with his 3 year-old brother. On February 1st, he was admitted to the hospital for the scheduled BMT. Hickmann catheter was placed on February 2nd under general anesthesia by an Interventional Radiologist. He was moved to the BMT unit on February 3rd and started conditioning treatment with busulfan 130mg/m2(88mg), cyclophosphamide 60mg/kg (900mg), antithymoglobulin 1v/10kg(1.5v) on February 4th. The BMT was done on February 11th. Post BMT study was done until end of May. He returned home in June.

A Russian patient sent from Japan to Korea receives 2 to 1 liver transplantation

It was Korean medical intervention that saved a life of a 27-year-old Russian patient with alcoholic cirrhosis through a 2 to 1 liver transplantation. First, while he was seeking a globally reputable medical institution with his doctor in Russia, he was scheduled for treatment in a hospital in Japan. However, he was not granted an operation, as his health had worsened and in addition, his mother and his aunt, who were his donors, were told that they were inappropriate for living donor liver transplantation as they were too old and the size of their livers was too small. Eventually, the Japanese hospital requested Korea, which has advanced technologies in liver transplantation, to perform the surgery. The Korean hospital performed a 2 to 1 liver transplantation in which a part of the liver of the mother and a part of the aunt’s liver were transplanted to the patient. The living donor transplantation at 2 to 1 is difficult to complete successfully, as it requires sufficient experience and intensive care for critical patients, but the Korean hospital was able to achieve success thanks to its years of experience. After recovering his health, the patient said with a smile that it would have been easier if he had just visited Korea first.

Hematemesis patient from Mongolia with cirrhosis complications visits Korea

A 36-year-old male patient, who came to Korea in September 2012 after being told he needed a liver transplant due to hepatitis B and cirrhosis, was vomiting blood in the plane and was transported to the emergency room and admitted to the intensive care unit. An esophageal varicose ligation was performed with transfusion at Hb 5.9, but he continued bleeding due to developed cirrhosis and complications. Even with the administration of more than abdominal paracentesis of 6 liters in 3 days, his condition still did not improve, and it was clear that an emergency liver transplant was needed. Although his sister was tested for donor adequacy, she was not an acceptable candidate as her liver was too small. In this process, the health of the patient was getting worse and the cousin of his wife (23 years) volunteered to be a donor. A living donor liver transplantation was carried out in October 2012 and the patient is now maintaining normal liver function with the minimum immunosuppressant. Currently, the blood test results of the patient are sent to Korea every 3 months for managing patient.

Korea's kidney transplantation technologies minimizing wound and pain

A young Mongolian man who was suffering from chronic renal failure with diabetic complications that had been identified too late through a pediatric diabetes diagnosis started to receive treatment, but it was difficult to stop the development of chronic renal failure. As his heart function had deteriorated significantly, he was not able to receive a kidney transplantation. As the treatment in his country was no longer effective, he decided to visit Korea and was finally transplanted with a kidney after securing the surgical safety through a number of precision examinations. The donor was his father and the hand-assisted laparoscopic donor nephrectomy technique was applied to minimize the wound and pain, and the extracted kidney was transplanted into the right lower abdomen of the patient. After the surgery, the function of his kidney and heart were rapidly recovered and the patient was able to leave the hospital only 12 days after the surgery, without complications. The patient's mother said, "We were told that the surgery was not possible due to my son's poor heart condition. But we really appreciate what Korea's medical staffs could do, as they helped my son recover his health and return home again."

Korean medical staffs provide voluntary medical services to vulnerable foreigners

A young Vietnamese woman started to receive blood dialysis for end stage renal failure caused by chronic glomerulonephritis when she was 26 years old. Seeking a better medical environment, she came to Korea, desperate for a kidney transplant. Fortunately, her mother volunteered to be a donor, but they couldn't afford the charge for the operation, so the patient had been relying on blood dialysis. Hearing about her story, Korean doctors decided to provide her assistance, and she was successfully transplanted with a kidney. It has been a year since she left the hospital, and she is currently enjoying good health.

Russian male infant suffering from liver dysfunction due to biliary atresia, jaundice and fever receives a liver transplant from his mother

A Russian infant patient born in March 2012 was diagnosed with biliary atresia at a hospital in Moscow. The boy came to Korea suffering from liver dysfunction due to fever and jaundice. The liver functionality evaluation and liver transplantation suitability test revealed that he was a good candidate for a liver transplant from his mother, and he received a living donor liver transplant in 2015 and is currently recovering his health.

3. Information on Korean Medical Services for International Patients

The Entry

To reduce the treatment period in Korea and receive medical attention as quickly as possible, prepare your medical condition and treatment history, get counseling and make reservations at a desired Korean medical institution and provide your most recent health information available to the appropriate medical institution.

To enter Korea, depending on your nationality, you might require a VISA. Where necessary, you might require a medical VISA to enter Korea. You can get a medical VISA by submitting an application to the relevant diplomatic office, or your desired Korean medical institution or agency may submit the application on your behalf.

If you are subject to a tourist Visa (C-3-2) or a no-visa entry (up to 60 days allowed according to the agreement between countries), and if you require more time for treatment, your medical institution can support you in getting a medical VISA. If you enter Korea with a medical VISA (C-3-3, allows patients to stay in Korea for 90 days), but you need more days for treatment, your medical institution will help you switch your VISA to a long-term medical VISA (G-1-10, allows patients to stay in Korea for 180 days).

If you are accompanied, it is recommended that your companion be issued with documentary evidence by the embassy demonstrating your family relationship, so that they can be issuedthe same VISA as you. In addition, as you and your companion may be required to demonstrate a family relationship, please be prepared to do so before entering Korea.

You can receive information of concierge services such as transportation, accommodation, food, etc. from your medical institution or agency. However, in some cases, such services may be have fees, so please be informed before entry in order to minimize inconvenience and confusion. In addition, when you need pickup or ambulance service, you are required to submit a request to the applicable medical institution in advance. You are advised to check whether interpretation services are provided.

Before going to Korea, check the reservation information with the medical institution in Korea and provide the medical institution with your departure and arrival information as well as with your contact information during your stay in Korea. In addition, please acquire the contact information of your liaison at your medical institution in Korea and get in touch with him or her when you arrive in Korea.

On Arrival

If you must have personnel on standby at the medical institution or agency, or if you must directly move to the medical institution or other form of accommodation, you should be aware of the transportation information and take necessary action. In the event that you experience any problem during transportation, you should contact the appropriate professionals for immediate help. In addition, if you need to rent a mobile phone in Korea, discuss this with your medical institution in advance to see whether you may rent it from them. If this service is not available, you can rent a mobile phone at the airport.

If you enter Korea earlier than the scheduled date set by the medical institution for treatment, you should pay careful attention to your health condition. For emergency purposes, keep the contact information of your medical institution in your bag or pocket.

During Treatment

Before being treated at a medical institution, please consult with your designated doctor and nurse in advance and determine whether a coordinator should provide interpretation services or not. When you are admitted into the hospital, please consult with the hospital about your meals. Follow the instructions given by your doctor and nurse to ensure fast recovery after treatment. You are also recommended to receive or secure information about the health management facilities furnished by the hospital.

End of Treatment

When you leave the hospital, you will be issued medical records and examination results, and you may be prescribed up to 3 months of medicine. Make sure a prescription written in English is enclosed. Request assistance from the medical institution to prevent problems when returning to your country. When paying the fees for the medical service, check the details and make any necessary inquiries before making payment. Check your next schedule to see whether you are required to visit the hospital again. Be aware of the instructions that you are required to follow in your country for follow-up treatment or health management. Whenever necessary, to ensure a safe departure to your country, please notify the medical institution of your departure schedule.

International Healthcare Services

Major medical institutions in Korea offer international healthcare centers to provide medical services for foreign patients. These services include interpretation, medical reception and request service, customized care service, VISA extension service, airport pickup service, and a 24-hour call service, all of which are intended to ensure prompt medical services for international patients.

Korea,

Global Leader in Organ Transplantation and Bone Marrow Transplantation

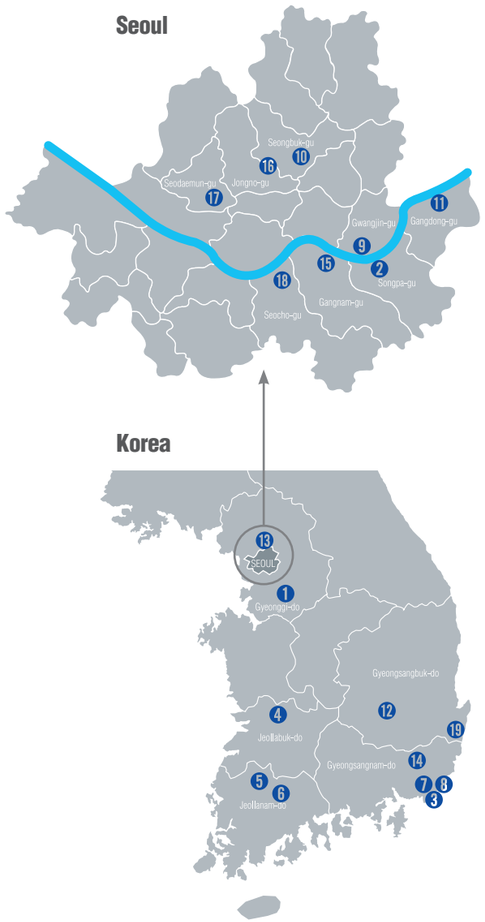
VI

Transplantation Centers in Korea

- Ajou University Hospital
- Asan Medical Center
- Bongseng Memorial Hospital
- Chonbuk National University Hospital
- Chonnam National University Hospital
- Chonnam National University Hwasun Hospital
- Inje University Busan Paik Hospital
- Inje University Haeundae Paik Hospital
- Konkuk University Medical Center
- Korea University Anam Hospital
- Kyung Hee University Hospital at Gangdong
- Kyungpook National University Hospital
- National Cancer Center
- Pusan National University Yangsan Hospital
- Samsung Medical Center
- Seoul National University Hospital
- Severance Hospital, Yonsei University College of Medicine
- The Catholic University of Korea Seoul St. Mary's hospital
- Ulsan University Hospital

* 8 centers in Seoul and 11 centers in the region
* *Listed in alphabetical order*

Transplantation Centers in Korea



Liver Kidneys

❶ Ajou University Hospital (since 1994)

- **Address**. 164 Worldcup-ro, Yeongtong-gu, Suwon, Gyeonggi-do, Korea
- **Tel**. 82-31-219-5432
- **E-mail.** inthcc@aumc.ac.kr
- **Homepage**. http:// hosp.ajoumc.or.kr
- **Language Service**. English, Chinese, Russian, Japanese
- **Meal services for foreign patients**

Liver Kidneys

❷ Asan Medical Center (since 1989)

- **Address**. 88, Olympic-ro 43-Gil, Songpa-Gu, Seoul, Korea
- **Tel**. 82-2-3010-5001
- **E-mail.** int@amc.seoul.kr
- **Homepage**. http:// eng.amc.seoul.kr
- **Language Service**. English, Chinese, Russian, Mongolian, Japanese, Arabic
- **Facilities for foreign patients**
- **Meal services for foreign patients**

Kidneys

❸ Bongseng Memorial Hospital (since 1985)

- **Address**. 401, Jungang-Daero(jwacheon-dong), Dong-gu, Busan, Korea
- **Tel**. 82-51-664-4000
- **E-mail.** since1949@naver.com
- **Homepage**. http:// www.bongseng.co.kr/foreign/eng/eng/EBook.htm
- **Language Service**. English, Chinese, Russian

Kidneys BMT

❹ Chonbuk National University Hospital (since 1983)

- **Address**. 20, Geonji-ro, Deokjin-gu, Jeonju-si, Jeollabuk-do, Korea
- **Tel**. 82-1577-7877
- **Homepage**. http:// www.cuh.co.kr
- **Language Service**. English

Kidneys

❺ Chonnam National University Hospital (since 1981)

- **Address**. 42, Jebong-ro, Dong-gu, Gwang-ju, Korea
- **Tel**. 82-62-220-6016
- **E-mail.** fordab@naver.com
- **Homepage**. http:// www.cnuh.com
- **Language Service**. English, Russian
- **Facilities for foreign patients**
- **Meal services for foreign patients**

BMT

❻ Chonnam National University Hwasun Hospital (since 2004)

- **Address**. 322 Seoyang-ro, Hwasun-eup, Hwasun-gun, Jeollanam-do, Korea
- **Tel**. 82-61-379-7892
- **E-mail.** geenie77@gmail.com
- **Homepage**. http:// www.cnuhh.com/eng
- **Language Service**. English, Chinese, Russian, Mongolian, Japanese, Arabic
- **Facilities for foreign patients**
- **Meal services for foreign patients**

Kidneys

❼ Inje University Busan Paik Hospital (since 1989)

- **Address**. 75, Bokji-ro, Busanjin-gu, Busan, Korea
- **Tel**. 82-51-890-6115
- **E-mail.** ria.seongmj@gmail.com
- **Homepage**. http:// www.paik.ac.kr/busan
- **Language Service**. English
- **Meal services for foreign patients**

BMT

❽ Inje University Haeundae Paik Hospital (since 2010)

- **Address**. 875, Haeundae-ro, Haeundae-gu, Busan, Korea
- **Tel**. 82-51-797-0566
- **E-mail.** ihc@paik.ac.kr
- **Homepage**. http:// haeundae.paik.ac.kr/eng/main/main.asp
- **Language Service**. English, Chinese, Russian, Japanese
- **Facilities for foreign patients**
- **Meal services for foreign patients**

BMT

❾ Konkuk University Medical Center (since 1982)

- **Address**. 120-1 Neungdong-ro (Hwayang-dong), Gwangjin-gu, Seoul, Korea
- **Tel**. 82-2-2030-7221
- **E-mail.** konkuh@gmail.com
- **Homepage**. http:// www.kuh.ac.kr/english
- **Language Service**. English, Chinese, Russian, Japanese
- **Facilities for foreign patients**

Liver Kidneys

❿ Korea University Anam Hospital (since 1941)

- **Address**. 73, Inchon-ro, Seongbuk-gu, Seoul, Korea
- **Tel**. 82-2-920-6920
- **E-mail.** boaibs@gmail.com
- **Homepage**. http:// anam.kumc.or.kr/language/ENG
- **Language Service**. English, Chinese, Russian, Mongolian, Arabic
- **Facilities for foreign patients**
- **Meal services for foreign patients**

Kidneys

⓫ Kyung Hee University Hospital at Gangdong (since 2005)

- **Address**. 892 Dongnam-ro Gangdong-gu, Seoul, Korea
- **Tel**. 82-2-440-7304
- **E-mail.** kuimsseoul@gmail.com
- **Homepage**. http:// www.kuims.or.kr
- **Language Service**. English, Chinese, Russian
- **Facilities for foreign patients**
- **Meal services for foreign patients**

Kidneys

⓬ Kyungpook National University Hospital (since 1910)

- **Address**. 130 Dongdeok-ro, Jung-gu, Daegu, Korea
- **Tel**. 82-53-200-6114
- **E-mail.** knuh200@hanmail.net
- **Homepage**. http:// eng.knuh.kr/main
- **Language Service**. English, Chinese, Russian, Japanese

Liver

⓭ National Cancer Center (since 2000)

- **Address**. 323 Ilsan-ro, Ilsandong-gu, Goyang-si, Gyeonggi-do, Korea
- **Tel**. 82-31-920-1070
- **E-mail.** berrycool@ncc.re.kr
- **Homepage**. http:// ncc.re.kr/english/index.jsp
- **Language Service**. English
- **Facilities for foreign patients**

Liver

⓮ Pusan National University Yangsan Hospital (since 2008)

- **Address**. 20, Geumo-ro, Mulgeum-eup, Yangsan-si, Gyeongsangnam-do, Korea
- **Tel**. 82-55-360-2011
- **E-mail.** hyeyoung@pnuyh.co.kr
- **Homepage**. http:// www.pnuyh.or.kr
- **Language Service**. English, Chinese, Russian, Mongolian, Japanese
- **Facilities for foreign patients**
- **Meal services for foreign patients**

Liver Kidneys BMT

⓯ Samsung Medical Center (since 1994)

- **Address**. 81 Irwon-Ro Gangnam-gu. Seoul, Korea
- **Tel**. 82-2-3410-0200
- **E-mail.** ihs.smc@samsung.com
- **Homepage**. http:// english.samsunghospital.com/main/english.do
- **Language Service**. English, Chinese, Russian, Mongolian, Japanese, Arabic
- **Facilities for foreign patients**
- **Meal services for foreign patients**

Liver Kidneys BMT

⓰ Seoul National University Hospital (since 1978)

- **Address**. 101 Daehak-ro, Jongno-gu, Seoul, 03080, Korea
- **Tel**. 82-2-2072-0505
- **E-mail.** international@snuh.org
- **Homepage**. http://snuh.org/english
- **Language Service**. English, Chinese, Russian, Mongolian, Japanese, Arabic, French
- **Facilities for foreign patients**
- **Meal services for foreign patients**

Liver Kidneys BMT

⓱ Severance Hospital, Yonsei University College of Medicine (since 1885)

- **Address**. 50-1 Yonsei-ro, Seodaemun-gu, Seoul, Korea
- **Tel**. 82-2-2228-5817
- **E-mail.** medseverance@yuhs.ac
- **Homepage**. http:// www.yuhs.or.kr/en/
- **Language Service**. English, Chinese, Russian, Mongolian, Japanese, Arabic
- **Facilities for foreign patients**
- **Meal services for foreign patients**

Liver BMT

⓲ The Catholic University of Korea Seoul St. Mary's hospital (since 1980)

- **Address**. 222 Banpo-Daero, Seocho-gu, Seoul, Korea
- **Tel**. 82-2-2258-5745
- **E-mail.** ihcc@catholic.ac.kr
- **Homepage**. http:// www.cmcseoul.or.kr/global/eng/front
- **Language Service**. English, Chinese, Russian, Japanese, Arabic, French
- **Facilities for foreign patients**
- **Meal services for foreign patients**

Liver Kidneys BMT

⓳ Ulsan University Hospital (since 1975)

- **Address**. 877 Bangeojin Sunwhando-ro, Dong-gu, Ulsan, Korea
- **Tel**. 82-52-250-7222
- **E-mail.** intlnr@uuh.ulsan.kr
- **Homepage**. http:// www.uuh.ulsan.kr
- **Language Service**. English, Japanese
- **Facilities for foreign patients**
- **Meal services for foreign patients**

* List in alphabetical order

Ajou University Hospital

- **Address** 164 Worldcup-ro, Yeongtong-gu, Suwon, Gyeonggi-do, Korea
- **Homepage** http:// hosp.ajoumc.or.kr/
- **Tel** 82-31-219-5432

Ajou University Hospital is a large scale medical institute where more than 4,000 patients a day on average. It receives outpatient treatments at 41 clinical departments and several specialized clinics and centers and more than 1,000 patients are hospitalized. It is implementing treatment of patients' diseases without any carelessness with the state-of-the-art medical equipment such as Full PACS, MRI, PET CT, Davinci Robot Surgery, and so on. In operating the International Health Care Center, it has provided international patients with high quality medical services. It provided medical treatment to more than 3,830 international patients in 2014, among whom were there a variety of international patients ranging from patients with serious illness to those who visit for just health examination, who showed high level of satisfaction.

- Tertiary Care Teaching Hospital(Established in 1994)
- 41 Departments and 7 Centers
- 1,096 Beds • 614 doctors
- Organ Transplantation Center(Designated in 2011)
- 1,248 Nurses and 663 Staffs
- International Healthcare Center

Services of International Healthcare Center

	English	Chinese	Russian	Mongolian	Japanese	Arabic	French
Communication	○	○	○		○		
Medical Form	○		○				
Information (leaflet)	○		○				
Signage	○						
Facilities for foreign patients							
Meal for foreign patients	Western						

For inquiries: 82-31-219-5432 (inthcc@aumc.ac.kr)

It is reserved for foreign patients seeking treatment at the Ajou University Hospital. Since its foundation in 1994, by paying attention to and interested in diverse treatment and administrative support, Ajou University Hospital has made meticulous efforts to cater to international patients with high quality medical services and minimizing inconveniences. Allocating staff in complete charge of outpatient, inpatient, emergency room, respectively to channel all resources to international patients 24/7, the International Healthcare Center is doing its best to help international patients quickly heal with the help of the top notch medical staff, medical apparatus.

Situated on the ground floor of the newly constructed building named the Wellbeing Center, the center is ready to provide various medical services by accommodating patients with spacious office and a comfortable and snug waiting area, and assistance for foreign visitors by staff qualified in English, Japanese and Russian.

In particular, upon its opening, the hospital has built a joint alliance not only with the U.S. Military Medical Group that recognized our competent and efficient staff and up to date medical equipment, but also with Overseas Hospitals or medical travel agencies by which patients may be referred for medical services requiring high technology. Also, it has relationships or contracts with overseas insurances themselves or their assistance partners. Thus, it is capable of providing administrative supports for patients to get financial cooperation from their insurances.

History of Organ Transplantation Center

Year	Achievment
1995. 6	The 1st brain-dead donor liver & kidney transplantation
2007. 3	The 200 cases of a kidney transplantation
2007. 4	The treatment of hemophilia and liver cancer simultaneously with liver transplantation
2007. 5	The ABO-incompatible living donor liver transplantation
2009. 4	The 200 cases of a liver transplantation
2011. 6	Appointed as a the Organ Transplantation Medical institute
2012. 8	Appointed as a the Organ transplantation Center in Ajou University Hospital
2012. 8	The 300 cases of a liver transplantation
2013.11	The 500 cases of a kidney transplantation
2012. 4	The first Liver Transplantation Symposium
2013.10	Exchanged the agreement between the Korea Organ Donation Agency and Ajou University Hospital for 'Activation of Organ Donation'
2015. 8	The 430 cases of a liver transplantation The 650 cases of a kidney transplantation

Outcomes of Liver Transplantation

Ajou University hospital has started brain-dead donor liver transplantation on 1995, and the living donor liver transplantation on 2005. The number of liver transplantation is annually increasing and we have performed 63 cases of liver transplantation on 2014. Our liver transplantation center succeeded the ABO-incompatible living donor liver transplantation on 2007 for the first time in Korea. The ABO-incompatible liver transplantation is now one of our specialties in the liver transplant field. Also, we have specialty in right posterior sector graft donation for the living donors who have disproportionately too small left liver volume to donate partial liver. Our center experienced more than 650 liver transplantations until August 2015, and the outcomes of the liver transplantation also favorable. Ajou University hospital is actively supporting the liver transplant team, patients, and his family as well.

Outcomes of Kidney Transplantation

Korea's first kidney transplant was performed in June of 1995, and less than 20 years later, more than 500 kidney transplants were performed in 2013, and more than 600 were performed in 2014. As of the end of 2014, there are approximately 500 patients in Korea who are waiting for a kidney transplant from brain deceased donors. Not only exchange transplantations but also transplantations on high risk patients have been actively performed. Even blood type mismatch transplantations were attempted for the first time in 2014. Korea is proud to have achieved excellent results after transplantation compared to medical institutions in other countries.

Tangible achievement of study

Liver Transplantation

Liver transplant center in Ajou University hospital have contributed in clinical and basic research in the liver transplant field. Our representative clinical researches include ABO-incompatible living donor liver transplantation, living donor liver transplantation using right posterior sector graft, and liver transplantation for hepatocellular carcinoma. Our team is also contributing basic research for ischemic reperfusion injury in liver transplantation, and cardiac death donor liver graft. Our team also has special research on hepatocellular carcinoma and its surgical treatment.

- Normothermic ex-vivo liver perfusion for the DCD liver graft.
- Liver transplantation in the rat.
- Molecular marker for HCC recurrence after liver transplantation.

- Kim BW, Xu W, Wang HJ, Park YK, Lee K, Kim MW. Volumetry-based selection of right posterior sector grafts for adult living donor liver transplantation. Liver Transpl. 2011 Sep:17(9):1046-58.
- Kim BW, Park YK, Xu W, Wang HJ, Lee JM, Lee K. Clinical significance of right hepatectomy along the main portal fissure on donors in living donor liver transplantation. Transpl Int. 2012 Oct:25(10):1072-83.
- Kim BW, Bae BK, Xu W, Wang HJ, Kim MW. Living donor liver transplantation for an adult patient with situs inversus totalis. World J Gastroenterol. 2010 May:16(18):2311-3.
- Kim BW, Bae BK, Lee JM, Won JH, Park YK, Xu WG, Wang HJ, Kim MW. Duct-to-Duct Biliary Reconstructions and Complications in 100 Living Donor Liver Transplantations. Transplant Proc. 2009 Jun:41(5):1749-55.
- Kim BW, Park YK, Kim YB, Wang HJ, Kim MW. Salvage liver transplantation for recurrent hepatocellular carcinoma after liver resection: feasibility of the milan criteria and operative risk. Transplant Proc. 2008 Dec:40(10):3558-61.

Kidney Transplantation

- Comparative Clinical Study of Renal Graft Function under the Immunosuppression Strategies with Reduced Dose of Tacrolimus and Standard Dose of Mycophenolate Mofetil (MYREPT®) vs. Conventional Dose of Tacrolimus and Reduced Dose of Mycophenolate Mofetil (MYREPT®) in De Novo Renal Transplant Recipients.
- Kidney Graft Function under the Immunosuppression Strategies with Low Dose of Neoral®(Cyclosporine) and Standard Dose of Myfortic®(Enteric-Coated Mycophenolate Sodium) vs. with Conventional Dose of Neoral®(Cyclosporine) and Reduced Dose of Myfortic®(Enteric-Coated Mycophenolate Sodium) in De Novo Renal Transplant Recipients.
- Safety and efficacy of the step-wise reduction of immunosuppression with tacrolimus, mycophenolate mofetil, and basiliximab after kidney transplantation, and its effect on the glucose metabolism

- Safety and efficacy of the early introduction of everolimus with reduced-exposure cyclosporine a in de novo kidney recipients. Transplantation 2015:99:180-6.
- Clinical significance of multidetector coronary computed tomography angiography to evaluate the prevalence and severity of coronary artery disease in asymptomatic kidney transplantation recipients. Transplant Proc 2015:47:675-8.
- Age matching improves graft survival after living donor kidney transplantation. Transplant Proc 2014:46:449-53.

Asan Medical Center

- **Address** 88, Olympic-ro 43-Gil, Songpa-Gu, Seoul, Korea
- **Homepage** http:// eng.amc.seoul.kr
- **Tel** 82-2-3010-5001

Asan Medical Center (AMC) is the parent hospital of eight hospitals under the Asan Foundation. Since its establishment, Asan Foundation has opened hospitals in rural areas where modern medical resources are scarce, fulfilling the mission of the late Chairman Chung Ju-Yung - 'to help the underprivileged of our society.'

Global Medical Complex

Asan Medical Center is Korea's largest medical institution with 2,715 beds and occupying more than 281,000㎡in total floor space. AMC has led the medical development of Korea by striving to increase patient satisfaction with the best medical staff, optimum treatment, and cutting-edge medical technology based on advanced medical system. As a result, AMC treats 11,380 outpatients, 2,519 inpatients, and 310 emergency patients on average per day, and performs 59,947 cases of high-level operations per year. AMC, the leading hospital in Korea, is where most domestic patients visit.

Creating Global Standard

As the hospital leading Korea's medical development, Asan Medical Center is focusing not on domestic competition but to become the 'Global Standard Hospital in the World of Medicine.' With Asan Institute for Life Sciences and Clinical Research Center, AMC is striving to conquer cancer through clinical research and Industry-University-Institute Collaboration related R&D in basic medicine and new drugs.

- Tertiary Care Teaching Hospital(Established in 1989)
- 1,688 doctors
- 3,454 Nurses and 2,617 Staffs
- 60 Departments and 43 Centers
- 2,715 Beds and 5 Beds for only foreign patients
- Organ Transplantation Center(Opened in 1991)
- International Healthcare Center

Services of International Healthcare Center

	English	Chinese	Russian	Mongolian	Japanese	Arabic	French
Communication	○	○	○	○	○	○	
Medical Form	○					○	
Information (leaflet)	○	○	○	○	○	○	
Signage	○						
Facilities for foreign patients	Beds for only foreign patients, Lounge, Prayer Room						
Meal for foreign patients	Russian, Arabic						

For inquiries: 82-2-3010-5001 (int@amc.seoul.kr)

International Healthcare Center (IHC) is a dedicated department for foreign patients at AMC. IHC offers optimal treatment to each international patient. Our staffs are always willing to help patients during their treatment, providing individualized services such as appointment scheduling, fast-track medical exams, interpretation, financial counseling, and one-to-one escort service. IHC also provides English medical documents issuance, 24-hour hotline, customized food menu, and multinational newspapers & TV channels.
For organ transplant patients, we involve in every process of treatment and cooperate closely with the Organ Transplantation Center during their whole treatment period to help them take full advantage of our service.

History of Organ Transplantation Center

Year	Achievements
1991. 9	Organ Transplantation Center founded
1992. 5	Korea's 1st Multi-organ Donor Procurement from a Deceased Donor
1992. 7	Korea's 1st Simultaneous Pancreas-Kidney Transplantation & Living Donor Pancreas Transplantation
1992.11	Korea's 1st Heart Transplantation
1994.12	Korea's 1st Pediatric Living Donor Liver Transplantation
1997. 1	Korea's 1st Adult Living Donor Liver Transplantation
1999. 1	Korea's 1st Simultaneous Liver-Kidney Transplantation
	World's 1st Liver Transplantation with Right Lobe Graft with Middle Hepatic Vein Reconstruction
1999.11	Korea's 1st Pancreas Islet Cell Auto Transplantation
2000. 3	World's 1st Dual Graft Living Donor Liver Transplantation
2003. 8	Korea's 1st Split Liver Transplantation into Two Adult Recipients
2003. 9	World's 1st Donor Exchange Program in Liver Transplantation
2005. 3	Korea's 1st Simultaneous Heart-Kidney Transplantation
2006. 1	Korea's 1st Simultaneous Living Donor Pancreas-Kidney Transplantation
2007. 6	Korea's 1st Simultaneous Liver-Heart Transplantation
2008. 8	World's 1st Donor Exchange Program in Liver Transplantation among 4 Adults
2008. 11	ABO-incompatible Living Donor Liver Transplantation successfully performed
2009. 2	ABO-incompatible Living Donor Kidney Transplantation successfully performed
2011. 10	Korea's 1st Multi-visceral Organ Transplantation (7 organs)
2012. 2	Korea's 1st Simultaneous Liver-Lung Transplantation
2012. 8	World's 1st 3,000 cases of Living Donor Liver Transplantation
2013. 11	4,000 cases of Liver Transplantation
2013. 12	Korea's 1st Simultaneous Liver-Heart-Lung Transplantation
2014. 11	500 cases of Heart Transplantation
2015. 2	4,000 cases of Kidney Transplantation
2015. 7	300 cases of Pancreas Transplantation

Outcomes of Liver Transplantation

Since the first deceased donor liver transplantation (LT) in 1992, Asan Medical Center (AMC) performed Korea's first living donor liver transplantation (LDLT) in 1994. With the largest number of LT in the world, AMC has performed more than 4,500 cases of LT, including 3,800 cases of LDLT. With the world's first success in modified right lobe graft LT, dual graft LT, donor exchange LT, AMC has been also performing ABO-incompatible LT since 2008.

As the world dominant center for liver transplants, AMC has increasing number of international physician training in liver transplantation, and more international patients coming for liver transplantations.

Outcomes of Kidney Transplantation

Since its first kidney transplantation in 1990, AMC has accomplished 3,000 cases of kidney transplantation in 2012, just four years and nine months after having surpassed 2,000 transplants in 2007. Up till February 2015, AMC has successfully performed 4,000 cases of kidney transplantation, first in Korea. AMC has also succeeded in advanced kidney transplants such as simultaneous pancreas-kidney transplantation (SPK) from deceased donor (1992), Korea's first living donor SPK (2006), and ABO-incompatible living donor kidney transplantation (2009). Through these diverse kidney transplantations, AMC has provided new life to end-stage renal disease patients and led the development of Korea's kidney transplantation.

Tangible achievement of study

The staffs of AMC Organ Transplantation Center have published numerous research papers on liver and kidney transplantation. From 2011 to 2014, 50 papers on liver transplantation and 29 on kidney transplantation have been selected and published in SCI Journal. Below are some of the research papers that have been published.

- Biliary stricture is the only concern in ABO-incompatible adult living donor liver transplantation in the rituximab era (Journal of Hepatology, 2014)
- Usability of ringed polytetrafluoroethylene grafts for middle hepatic vein reconstruction during living donor liver transplantation(American Association for the Study of Liver Disease & the International Liver Transplantation Society, 2012)
- Isoniazid treatment to prevent TB in kidney and pancreas transplant recipients based on an interferon-γ-releasing assay: an exploratory randomized controlled trial(The Journal of Antimicrobial Chemotherapy, 2015)
- Long-term impact of human leukocyte antigen mismatches combined with expanded criteria donor on allograft outcomes in deceased donor kidney transplantation(Clinical Transplantation, 2015)
- Renal Vein Extension During Living-Donor Kidney Transplantation in the Era of Hand-Assisted Laparoscopic Living-Donor Nephrectomy(Transplantation, 2015)

Bongseng Memorial Hospital

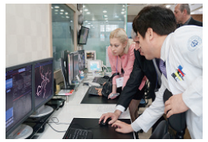
- **Address** 401, Jungang-Daero(jwacheon-dong), Dong-gu, Busan, Korea
- **Homepage** http:// www.bongseng.co.kr/foreign/eng/eng/EBook.htm
- **Tel** 82-51-664-4000

It's not big but strong!
BONGSENG MEMORIAL HOSPITAL is a general hospital focusing on patients based on its humanism.

- A leader with achievement of the first and highest record in the medical field in the Busan area
- Plays a significant role in the region's health care by introducing high tech medical equipments
- Accomplished first-class five times consecutively in acute stroke treatment (2014/Health Insurance Review and Assessment Service)
- Achieved the largest number of kidney transplant surgeries in Busan and Gyeongnam region(800 cases, August 2014)
- An emergency room stationed by four emergency medicine specialists 24/7
- Selected as the first-class medical institute for hemodialysis(2013/Health Insurance Review and Assessment Service)
- Interventional Cardiovascular Certificate Authority and Certification of Eligibility
- Cerebral Endovascular Surgery Certificate Authority and Certification of Eligibility

- Tertiary Care Teaching Hospital(Established in 1985)
- 60 doctors • 365 Nurses and 249 Staffs
- 17 Departments • 441
- Organ Transplantation Center(Designated in 2000)
- International Healthcare Center

Services of International Healthcare Center



	English	Chinese	Russian	Mongolian	Japanese	Arabic	French
Communication	○	○	○				
Medical Form	○						
Information (leaflet)	○		○				
Signage							
Facilities for foreign patients							
Meal for foreign patients							

For inquiries: 82-51-664-4000 (since1949@naver.com)

Outcomes of Kidney Transplantation

Bongseng hospital kidney transplantation center not only performs the highest number of transplants in the Busan and Gyeongnam region but also achieves the highest success rate in blood type mismatch kidney transplantation, cross-positive transplantation and other high level surgeries. It is also performing various clinical research activities to provide patients the opportunity for cutting edge treatments. As a result, our doctors are publishing more than 10 research papers in international journals every year, provide lectures for renal preservation treatment on the 4th Friday of every month, and have launched a peritoneal dialysis class on an annual scale to ensure that patients are trained appropriately in a continuous manner.

History of Organ Transplantation Center

Year	Major Events
1995	First kidney transplantation
2008	Became first medical institution to perform 500 kidney transplants annually in the Busan and Gyeongnam region
2009	First successful blood type mismatch kidney transplant
2012	Entered into an agreement with Korea Organ Donation Agency (KODA) for organ donation from the brain deceased
2014	– Became the first medical institution to perform 800 kidney transplantation cases annually in the Busan and Gyeongnam region – Achieved 50th successful blood type mismatch transplant, launched symposium – Selected as an excellent transplantation medical institution, Won the Minister of Health and Welfare award

Organ Transplantation Center

Chonbuk National University Hospital

- **Address** 20, Geonji-ro, Deokjin-gu, Jeonju-si, Jeollabuk-do, Korea
- **Homepage** http:// www.cuh.co.kr
- **Tel** 82-1577-7877

Chonbuk National University Hospital (CNUH) has been established as the best hospital in the west-coast region, where more than 2,000 staff and employees have been caring for 3,500 outpatients and 1,000 inpatients a day in 1,055 beds, to persue the value of `respect for life`.
CNUH has specialized centers, such as Jeonbuk regional emergency medical center, Jeonbuk regional cancer center, Geriatric medical center, Clinical research center, Children's hospital, Regional respiratory disease center, Organ Transplant Center, and is operating the equipment, such as 3.0T MRI, Image-Guided Radiation Therapy(IGRT), state-of-the-art surgical robot 'da vinci S', PET-CT, Dual CT, Gamma Knife, etc.
The accomplishment of 500 cases of successful organ transplant operations which include kidneys, livers and corneas shows that CNUH has played a leading role in the area of organ transplantation. We have been performed 85 liver transplantation and 413 kidney transplantation. We will strive to further improve our services and endeavor to overcome regional boundaries
And CNUH is conducting advanced medical care, creative research, committed medical volunteer activities and corporate social responsibilities.

- Tertiary Care Teaching Hospital(Established in 1983)
- 462 doctors
- 717 Nurses and 374 Staffs
- 32 Departments
- 1,055 Beds
- Organ Transplantation Center(Designated in 2008)

Services of International Healthcare Center

	English	Chinese	Russian	Mongolian	Japanese	Arabic	French
Communication	○						
Medical Form	○						
Information (leaflet)	○						
Signage	○						
Facilities for foreign patients							
Meal for foreign patients							

For inquiries: 82-1577-7877

Outcomes of Kidney Transplantation

The Organ Transplantation Center performs organ transplantation for patients with chronic organ diseases which cannot be treated otherwise. It began kidney transplants in 1989 and since then, it has performed over 400 kidney transplants. We performed 1st ABO incompatible kidney transplantation in 2014. The center started taking care of patients with irreversible coma in 1998. In 2005, it was designated as an official institution for making determinations on patients who may be in irreversible coma. It is making active efforts to promote organ donation and transplantation.

Outcomes of Bone Marrow Transplantation

The stem cell transplantation center started taking care of patients in 1999 and it has performed 222 cases stem cell transplantation. One hundred and six cases of autologous peripheral blood stem cell transplantation and 116 cases of allogenic stem cell transplantation had been performed.

History of Organ Transplantation Center

Year	Milestones
1989. 2	1ST kidney transplantation was performed.
1999. 5	1st liver transplantation and 1st bone marrow transplantation were performed.
2010. 3	Organ transplantation center was founded.
2014. 9	ABO incompatible kidney transplantation was performed
2015. 1	Four hundred cases of KT were performed. (245 deceased donors and 155 living donors)
2015. 8	Eighty five cases of liver transplantation (58 deceased donors and 27 living donors) and 222 cases of bone marrow transplantation were performed.

Tangible achievement of study

Kidney Transplantation

- Hwang HP, Yu HC, Park HS, Song JS, Kim W, Kang KP, Park SK, Lee S. Huge abdominal cyst occurred after kidney transplantation. Transplantation Proceedings 2014; 46: 657-658
- Hwang HP, Yang JD, Yu HC, Cho BH, Kwon KS, Park SK, Lee S. Factors predicting the usefulness of decreased donors. Transplantation Proceedings 2013; 45: 2875-2877
- Lee S, Huen S, Nishio H, NIshio S, Lee HK, Choi BS, Ruhrberg C, Cantley LG. Distinct macrophage phenotypes contribute to kidney injury and repair. J Am Soc Nephrol 2011; 22: 317-326

Bone marrow Transplantation

- Multicenter analysis of treatment outcomes in adult patients with lymphoblastic lymphoma who received hyper-CVAD induction followed by hematopoietic stem cell transplantation. Jeong SH, Moon JH, Kim JS, Yang DH, Park Y, Cho SG, Kwak JY, Eom HS, Won JH, Hong JS, Oh SY, Lee HS, Kim SJ.Ann Hematol. 2015 Apr:94(4):617-25. doi: 10.1007/s00277-014-2258-y. Epub 2014 Dec 3.
- Busulfan-containing conditioning regimens are optimal preparative regimens for autologous stem cell transplant in patients with diffuse large B-cell lymphoma.Shin HJ, Lee WS, Lee HS, Kim H, Lee GW, Song MK, Kim JS, Yhim HY, Chung JS.Leuk Lymphoma. 2014 Nov:55(11):2490-6. doi:10.3109/10428194.2014.882504. Epub 2014 Mar 7.
- Allogeneic hematopoietic cell transplantation without total body irradiation from unrelated donor in adult patients with idiopathic aplastic anemia: fludarabine versus cyclophosphamide-ATG. Kim H, Lee KH, Kim I, Sohn SK, Jung CW, Joo YD, Kim SH, Kim BS, Choi JH, Kwak JY, Kim MK, Bae SH, Shin HJ, Won JH, Lee WS, Oh Kim HJ, Park JH; Korean Society of Blood and Marrow Transplantation. Leuk Res. 2014 Jul:38(7):730-6. doi: 10.1016/j.leukres.2014.01.002. Epub 2014 Jan 10.

Chonnam National University Hospital

- **Address** 42, Jebong-ro, Dong-gu, Gwang-ju, Korea
- **Homepage** http:// www.cnuh.com
- **Tel** 82-62-220-6016

The Chonnam National University Hospital (CNUH) as a patient-oriented friendly hospital has tried our best for the development of medicine in the country and the health improvement of local residents, with over 100 years of tradition from the early age of Korea's modern medicine. We lead in the development of the local medical community and the medical industry by providing excellent healthcare and education, engaging in research, and contributing to the improvement of the community's health through dedicated services. We also work hard to contribute to the enhancement of national health and competitiveness. CNUH has grown into one of the best national university hospitals of the country in the core areas of medical service, research, and education, and served as a true patient-oriented hospital with the continuous love and support of local residents. Now, CNUH is reforming into a smart hospital with easy, fast, and convenient medical services, and kind information and instruction that impress patients and guide their re-visit. Now, you can have information on medical service appointment, medical service process or clinic finding through a smart phone. In the future, Chonnam National University Hospital will try its best to lead the medical development of the country, to promote and maintain the health of local residents, and to realize healthy and happy society through the devotion on research, medical services, and education with creative mind and challenge spirit.

- Tertiary Care Teaching Hospital(Established in 1981)
- 542 doctors • 662 Nurses and 617 Staffs
- 40 Departments and 6 Centers • 827 Beds
- Organ Transplantation Center(Designated in 2002)
- International Healthcare Center

Services of International Healthcare Center

International medical center(IMC) was established for increasing convenience and enhancing the efficiency of medical services for international patients in 1998. The number of patients visiting IMC was 261 in 1998 and has been increased up to 2,969 in 2010. Emergent service is available through On-call system in 38 specialties or sub-specialties over all medical fields. Almost 427 medical staffs are capable of English conversation and have experiences of studying in USA and other countries. A global leader, the Chonnam National University Hospital (CNUH) has successfully formed a medical network with many leading hospitals around the world. Through this network, CNUH is able to export its medical services and create added values through promoting medical tourism. In addition, by sharing its knowledge and experience with different hospital, CNUH looks to become a global leader within its field.

	English	Chinese	Russian	Mongolian	Japanese	Arabic	French
Communication	○		○				
Medical Form	○		○				
Information (leaflet)	○		○				
Signage	○						
Facilities for foreign patients	Prayer Room						
Meal for foreign patients	Russian						

For inquiries: 82-62-220-6016 (fordab@naver.com)

Outcomes of Kidney Transplantation

This hospital has performed a total of 454 kidney transplantations as of March 2015 since its first kidney transplantation in 1987. It successfully performed cross-examination positive kidney transplantation in 2013, and blood type mismatch kidney transplantation in 2014. Based on high transplantation performance and quality patient management, it was established as a local base hospital for transplantation, and is working not only to contribute to the development of domestic transplantation but also to become the world's leading transplantation hospital.

History of Organ Transplantation Center

Year	Major Events
1987	Performed the first kidney transplantation in the region
1992	Performed corneal transplantation
1996	Performed the first brain deceased donor liver transplantation in the region
2001	Opened an organ transplantation center
2009	Became the first medical institution to achieve achieve 300 cases of kidney transplant in Honam and Chungcheong regions
2014	Achieved successful blood type mismatch kidney and liver transplants
2014	Ranked 1st in district 2 in the evaluation of specialized brain deceased donor management institutions

Chonnam National University Hwasun Hospital

- **Address** 322 Seoyang-ro, Hwasun-eup, Hwasun-gun, Jeollanam-do, Korea
- **Homepage** http:// www.cnuhh.com/eng
- **Tel** 82-61-379-7892

A JCI Accredited Hospital Chonnam National University Hwasun Hospital, known as the most beuatiful hospital in Korea, provides state-of-the-art medical care in a refreshingly natural environment. As the first Natioanl University Hospital to be accredited by Joint Commission International(JCI), our hospital is proud of securing patients' safety and quality of care by international standards. Our hospital is internationally certified in maintaining world-class patient safety and delivering unmatched comprehensive medical care. We are also a nationally recognized, leading medical institution providing the highest quality services to families across the world. We focus on providing human-centered care, superior technology and the most advanced treatment. Our hospital introduces a bold new face of cancer care. Our hospital is eco-friendly, nested in Hwasun, the most beautiful town in South Korea. Patients can avoid the stress of metropolitan congestion.

- Tertiary Care Teaching Hospital(Established in 2004)
- 235 doctors • 479 Nurses and 487 Staffs
- 25 Departments • 701 Beds
- Organ Transplantation Center (Designated in 2004)
- International Healthcare Center

Services of International Healthcare Center

Your health is our most precious value. Chonnam National University Hwasun Hospital, with the world's leading medical care providers and cutting-edge technology, is striving to further our international reputation. We are seeking to improve global health and quality of life through the treatment of foreign patients with cancer. Our international medical center provides medical services exceeding global standards, such as integrated support services for foreigners, international medical insurance claims service, and medical appointment consultation, for the convenience of foreigners residing in Korea or visiting patients.

	English	Chinese	Russian	Mongolian	Japanese	Arabic	French
Communication	○	○	○	○	○	○	
Medical Form	○		○	○			
Information (leaflet)	○		○				
Signage	○	○					
Facilities for foreign patients	Lounge						
Meal for foreign patients	Western						

For inquiries: 82-61-379-7892 (geenie77@gmail.com)

Outcomes of Bone Marrow Transplantation

Hwasun Jeonnam University hematopoietic stem cell transplantation center originated from Jeonnam University hematopoietic stem cell transplantation center. Since the first aseptic room for marrow transplantation was installed in Jeonnam University Hospital in Gwangju in 1990, it came to feature a total of 12 aseptic rooms as of 2004 to provide more specialized medical services, and was relocated to Hwasun Jeonnam University Hospital. Hwasun Jeonnam University hematopoietic stem cell transplantation center performed its first hematopoietic stem cell transplantation in 1991, and as of the end of 2010 had performed more than 800 cases of hematopoietic stem cell transplantation, with a success rate of over 70%, which is equivalent to the success rate in advanced countries. In the recuperation pay adequacy evaluation, it has been revealed that the death rate related to hematopoietic stem cell transplantation at Hwasun Jeonnam University Hospital is 21%, which is very low compared to other hospitals. The center is comprised of specialized doctors in the division of blood internal medicine, the division of pediatrics, the division of infectious diseases, laboratory medicine and the division of radiation therapy, as well as dedicated transplantation nurses to provide care for transplantation patients, the nutrition team, transplantation coordinators, nurses in the blood donation room in charge of hematopoietic stem cell collection and researchers for processing, freezing, storage and basic clinical research of hematopoietic stem cells, and all staffs organized based on an organic cooperation model to maximize the treatment efficacy.

History of Organ Transplantation Center

Year	Major Events
1991	Performed the first hematopoietic stem cell transplantation in the region
1994	Achieved the first successful allogeneic peripheral blood stem cell transplantation in Korea
1995	Achieved the first successful allogeneic peripheral blood stem cell transplantation for a pediatric patient in Korea
1996	Achieved the first successful CD34 hematopoietic stem cell transplantation in Korea
2005	Became the 2nd hospital in Korea to achieve 500 cases of hematopoietic stem cell transplantation
2010	Achieved 800 cases of hematopoietic stem cell transplantation

Inje University Busan Paik Hospital

- **Address** 75, Bokji-ro, Busanjin-gu, Busan, Korea
- **Homepage** http:// www.paik.ac.kr/busan
- **Tel** 82-51-890-6115

Busan Paik Hospital Organ Transplant Center provides counseling and treatment to patients before and after renal transplantation. patients who need Kidney transplant are people suffering from end-stage renal disease (ESRD). These patients are in progress or impending dialysis because of kidney disease. established in 1994 as an institute of organ transplantation, developed to the transplant center in 2000. We have transplanted more than 40 kidneys steadily each year, 636 cases of kidney transplantation have been done until february 2015. Busan Paik Hospital Organ Transplant center is one of the most active Kidney transplant center in southeastern Korea.

- Tertiary Care Teaching Hospital(Established in 1989
- 401 doctors
- 804 Nurses and 620 Staffs
- 24 Departments and 9 Centers
- 892 Beds
- Organ Transplantation Center(Designated in 2000
- International Healthcare Center

Services of International Healthcare Center

Paik International Health Service (PIHS) is a nationally accredited health center that is open 5 days per week. The center provides health care for foreign residents and tourists in Busan, Korea.
Full-time nurse, coordinators, physicians are on site during all open hours. All health professionals are board certified and experienced. All physicians hold faculty positions in Inje Medical School. At the IHS, patients will be provided management from experienced staffs for their physical and psychological problems without suffering from language barrier.

	English	Chinese	Russian	Mongolian	Japanese	Arabic	French
Communication	○						
Medical Form	○						
Information (leaflet)	○						
Signage	○						
Facilities for foreign patients							
Meal for foreign patients	Russian, Arabic, Mongolian						

For inquiries: 82-51-890-6115 (ria.seongmj@gmail.com)

Outcomes of Kidney Transplantation

Since its first kidney transplantation in 1990, this hospital has been leading the way in transplantation of both kidneys from the youngest brain deceased donor. It has also achieved successful re-transplantation of a kidney from a brain deceased donor in 2013, a first in Korea. Hwasun Jeonnam University Hospital has been participating in domestic and overseas academic conferences, clinical tests and joint research activities to contribute to the development of transplantation, and currently provides laparoscopic nephrectomy to minimize the surgical area and kidney transplantation with four nephrology physicians and two nursing coordinators.

History of Organ Transplantation Center

Year	Major Events
1994	Organ transplantation research institute founded
2000	Renamed the organ transplantation center
2004	Achieved a Korean first with the transplantation of both kidneys from the youngest brain deceased donor (9 months old)
2011	Achieved a Korean first with the transplantation of both kidneys from the youngest brain deceased donor (80 days old)
2011	Achieved 500 cases of kidney transplantation
2013	Achieved the reuse of graft from a brain deceased beneficiary who had been transplanted with a kidney from a brain deceased donor
2015. 2	Performed a total of 636 kidney transplants

Inje University Haeundae Paik Hospital

- **Address** 875, Haeundae-ro, Haeundae-gu, Busan, Korea
- **Homepage** http:// haeundae.paik.ac.kr/eng/main/main.asp
- **Tel** 82-51-797-0566

Inje University Haeundae Paik Hospital has opened on March 25. 2010, aims to be the best among first-class hospitals as a medical hub of Northeastern Asia and offers the best medical services with the most advanced medical equipment such as Da vinci S, Leksell Gamma Kinfe Perfexion and the newest medical technologies. We offer many specialized care centers such as Shock Trauma Center, Organ Transplantation Center, Robotic Surgery Center, Comprehensive Cancer Center, Cardiovascular Center, Gamma Knife Center, Spinal Center, Thyroid Center, and others, are comprised of the best medical staffs and provide 'one-stop' service with a multidisciplinary team for outstanding medical service.

- Tertiary Care Teaching Hospital(Established in 2010)
- 302 doctors
- 749 Nurses and 725 Staffs
- 33 Departments and 15 Centers
- 1,004 Beds
- Organ Transplantation Center (Designated in 2010)
- International Healthcare Center

Services of International Healthcare Center

	English	Chinese	Russian	Mongolian	Japanese	Arabic	French
Communication	○	○	○		○		
Medical Form	○		○				
Information (leaflet)	○		○		○		
Signage	○	○	○				
Facilities for foreign patients	Prayer Room						
Meal for foreign patients	Russian, Western						

For inquiries: 82-51-797-0566 (ihc@paik.ac.kr)

International Health Care Center is lead by a team of medical professionals and translators fluent in foreign languages and help non-Korean patients feel comfortable and completely at ease

Outcomes of Bone Marrow Transplantation

Performed a total of 131 cases of hematopoietic stem cell transplantation since 2010 (autologous: 65, sibling: 66)

History of Organ Transplantation Center

Year	Major Events
2010. 7	Designated as a registered organ transplantation institution/organ transplantation medical institution
2012. 1	Designated as a specialized brain deceased donor management institution
2012.11	Entered into agreement with Korea Organ Donation Agency to promote organ donation
2014. 4	Entered into agreement with Korea Foundation for Human Tissue Donation for the Government undertaking project

Konkuk University Medical Center

- **Address** 120-1 Neungdong-ro (Hwayang-dong), Gwangjin-gu, Seoul, Korea, 05030
- **Homepage** http:// www.kuh.ac.kr/english
- **Tel** 82-2-2030-8361

Konkuk University Medical Center(KUMC) was established by Dr. YOO, Suk-chang for impoverished civilians in 1931. The hospital was founded with his devotion to the provision of unreserved medical service to help people. KUMC was reborn in the year of 2005 as a response to the rapid changes in medical environments and in order to provide high-quality medical service. The hospital has adopted a fully-digitalized medical chart system, paired with state of the art medical equipments.
Our medical professionals and staff are united to provide the patients with medical care of the highest quality. Under these high standards, KUMC strives to provide you the most pleasant experience in receiving medical treatment. KUMC will continue to grow with a goal to emerge as a true global medical center. Furthermore, we will humbly take your valuable opinions into account and dutifully reflect on them with respect to the various operations of the hospital. We will try to make significant contributions to fulfill personal needs and care with an openness that affirms life and healing.

- Tertiary Care Teaching Hospital(Established in 1982)
- 457 doctors
- 850 Nurses and 1064 Staffs
- 33 Departments and 15 Centers
- 879 Beds
- Organ Transplantation Center (Designated in 2009)
- International Healthcare Center

Services of International Healthcare Center

	English	Chinese	Russian	Mongolian	Japanese	Arabic	French
Communication	○	○	○				
Medical Form	○						
Information (leaflet)	○	○	○	○	○		
Signage	○	○					
Facilities for foreign patients	Prayer Room						
Meal for foreign patients	Western meal						

For inquiries : 82-2-2030-8361 (konkuh@gmail.com)

International Clinic opened at 2010 with the vision to make Konkuk University Medical Center an internationally renowned medical center for its high-quality medical technique. Our clinic does not provide direct medical treatment, though we act as a liaison between patients and specialists throughout Konkuk University Medical Center. Our mission is to make our hospital a more convenient and friendly space for all patients from all around the world. We make a great effort to accommodate the needs or requests made by foreign patients and to provide world-class medical services.

Outcomes of Bone Marrow Transplantation

The hematopoietic stem cell transplantation room and hematopoietic stem cell transplantation clinic under the blood cancer center in this hospital were launched in 2007, and their services cover sibling hematopoietic stem cell transplantation and autologous hematopoietic stem cell transplantation to cure blood diseases such as acute leukemia, chronic leukemia, malignant lymphoma, multiple myeloma, myelodysplastic syndromes and aplastic anemia. The hospital performs not only sibling transplants but also non-sibling transplants, as well as cord blood transplants and semi-match sibling transplants. Since 2007, it has been performing more than 20 transplants every year.

History of Organ Transplantation Center

Year	Major Events
2005	Opened organ donation office
2009	Registered as a transplantation medical institution

Korea University Anam Hospital

- **Address** 73, Inchon-ro, Seongbuk-gu, Seoul, Korea
- **Homepage** http:// anam.kumc.or.kr/language/ENG
- **Tel** 82-2-920-6920

Korea University Anam Hospital has grown to be the leading medical center in South Korea by providing the most advanced medical technology and excellence in patient-centered care. We are committed to offering the most personalized and safe treatment plans for our patients, therefore, receiving accreditation by the International Joint Commission JCI certification and FERCAP which are the international certifications in the field of medical research.

- Tertiary Care Teaching Hospital (Established in 1941)
- 594 doctors
- 825 Nurses and 739 Staffs
- 37 Departments and 10 Centers
- 1,008 Beds and 31 Beds for only foreign patients
- Organ Transplantation Center (Designated in 2006)
- International Healthcare Center

Services of International Healthcare Center

	English	Chinese	Russian	Mongolian	Japanese	Arabic	French
Communication	○	○	○	○		○	
Medical Form	○	○	○	○			
Information (leaflet)	○	○	○	○		○	
Signage	○	○	○	○			
Facilities for foreign patients	Beds for only foreign patients, Lounge, Prayer Room						
Meal for foreign patients	Russian, Arabic, Mongolian						

For inquiries: 82-2-920-6920 (boaibs@gmail.com)

The Korea University Anam Hospital International Healthcare Center first opened its doors in 2009 and has been expanding its services ever since.

The center is staffed by doctors and nurses who are fluent in several languages and ready to serve the medical needs of foreigners in Korea. The center maintains an atmosphere of comfort and assurance, providing quality medical care and referrals to specialists throughout the hospital.

Outcomes of Liver Transplantation

This hospital features a system specialized in the liver transplantation for foreign patients, and is particularly focused on the ongoing management of patients, even after they return to the home country. It delivers global level performance both in living donor liver transplants and brain deceased liver transplants. In particular, it determines, through consultation with the patient and the guardian, a therapy for liver cancer that will deliver the best treatment results through a combination of transplantation and pre-transplantation treatment such as radioactive embolization, radiofrequency ablation, etc.

Outcomes of Kidney Transplantation

- Achieved success in kidney transplants for high risk patient groups, such as blood type mismatch patients or highly sensitive patients
- Dominant in terms of the number of kidney transplantation cases for foreigners in Korea for a period from 2010 to 2014 (67% in 2013 and 37% in 2014)
- Achieved success in high level transplants such as simultaneous transplant of kidney and pancreas from a living donor
- Hospital to which doctors from overseas go to learn organ transplantation techniques

History of Organ Transplantation Center

Year	Major Events
2004	Opened an organ transplantation center
2008	Designated as a specialized brain deceased donor management institute
2009	Certified for JCI (JOINT COMMISSION INTERNATIONAL)
2010	Awarded the Minister of Health and Welfare recognition for the transplantation sector
2013	Achieved Korea's first simultaneous transplantation of kidney and pancreas for an ABO incompatibility patient
2013	Broadcasted at Korea's Top doctors on Arirang TV
2013	Ranked 1st in the number of foreign kidney transplant patients and 2nd in the number of foreign liver transplant patients

Kyung Hee University Hospital at Gangdong

- **Address** 892 Dongnam-ro Gangdong-gu, Seoul, Korea
- **Homepage** http:// www.kuims.or.kr
- **Tel** 82-2-440-7304

KUIMS(Kyung Hee University International Medical Service) is newly created as the global brand of Kyung Hee University Hospital at Gangdong. KUIMS is an accredited, multi-specialty, university hospital located in Seoul, Korea. We are equipped with over 800 beds and 30 specialty centers. KUIMS offers state-of-the-art diagnostic, therapeutic and intensive care facilities in a one-stop medical center. We attract patients from all over the world by marketing and promoting and serves over 14,000 international patients annually though the brand of KUIMS. KUIMS has been recognized as the leader in providing Medical Services to international patients.

- Tertiary Care Teaching Hospital(Established in 2005)
- 300 doctors
- 800 Nurses and 100 Staffs
- 31 Departments and 12 Centers
- 800 Beds and 10 Beds for only foreign patients
- Organ Transplantation Center (Designated in)
- International Healthcare Center

Services of International Healthcare Center

	English	Chinese	Russian	Mongolian	Japanese	Arabic	French
Communication	○	○	○	○			
Medical Form	○		○				
Information (leaflet)	○		○				
Signage	○		○				
Facilities for foreign patients	Beds for only foreign patients, Lounge, Prayer Room						
Meal for foreign patients	Russian, Arabic, Mongolian						

For inquiries : 82-2-440-7304 (kuimsseoul@gmail.com)

Our Center manages the overall processes for patients from hospitalization to after care in leaving Korea, following marking and promotional campaigns both inside and outside the country. It has two main teams; Department. Of International Cooperation dealing with administrative procedures and International Healthcare Clinic directly related to clinic treatments. Our Team helps to support the procedures for visa, patients' complaints occurred in hospital, scheduling managements, and all the information for traveling in Korea. Our Clinic has 12 specialists and it performs Smart Care Service including Smart Check Up, Fast Track, and Smart After-Care Service which would reduce waiting time and help to serve foreign VIPs, which will contribute to the convenience of patients.

Organ Transplantation Center

At organ transplantation center, we do our best to provide the confidence for the patients who can feel to be in skilled, capable and experienced hands. We are with patients every step of the way, from preparing everything before the transplant through your recovery. We will always take the time to explain a procedure or answer your questions.

Kyung Hee Transplant Program

- Nationally renowned research and care
- Leaders in the field
- Comprehensive, expert services
- Full spectrum of care for transplant recipients

Outcomes of Kidney Transplantation

- Perform 30 cases of kidney transplants annually, and 95% of success rate on kidney transplants in five years
- Selected as a main research institute for 'The development of Immunomodulatory Techniques on kidney transplant' by Ministry of Health & Welfare.

-100% success rate of ABO incompatible kidney transplantation and kidney transplantation Desensitization.
- Specified as a superior management agency of brain-dead organ donors by Korea Centers for Disease Control and Prevention

Tangible achievement of study

Major research program

- Development of non-invasive diagnostic test for the acute rejection with blood and urine
- Development of biomarkter tests predictive of transplant tolerance or "near-tolerance"

Clinical relevance of the research

Transplantation is an effective treatment for patients with severe kidney disease. However, the risks of surgery include transplant rejection—where the recipient's immune system recognizes the donor organ as foreign and attempts to remove or destroy it—and a series of immune responses that damage the transplanted organ over time, most often developing in kidney transplant patients. Our research is aimed to develop the biomarkers of acute rejection and tolerance from the combination of gene expression data and biomarker data from blood and urine.
We already have found serial sets of transcriptomic biomarkers for acute rejection and tolerance. By continuing registry study of operational tolerant kidney transplant patients, we aims to validate these identified biomarker signatures as well as better understand the mechanisms of rejection and tolerance.

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History of Organ Transplantation Center

Year	Contents
2006	Designated by Ministry of Health & Welfare - Registration authority and health organization of organ transplantation
2006	1st kidney transplantation surgery in December
2007	Succeed in the 1st surgery of Brain-dead donor kidney transplantation (even before the 1st year of hospital opening)
2008	Succeed in the 1st domestic kidney transplantation for adult urea cycle disorder.
2009	Succeed in kidney transplantation for a Paraquayan couple
2008	Designated by Korea Centers for Disease Control and Prevention - As a Management agency for brain-dead organ donors(HOPO) → The 8th health organization in the first area(capital area/ Jeju area)
2011	Become TOP 10 kidney transplantation health organization nationwide in 5 year of hospital opening
2012	Succeed a ABO incompatible kidney transplantation
2012	Specified as a national merit organization of organ donation and human tissue donation, won a Minister of Health & Welfare award
2013	Achieve the 100th kidney transplantation
2014	Agreement for the Hospital management of donor action program with Korea organ donation agency(KODA)
2014	Celebrate for the 8th anniversary of hospital opening with Life sharing campaign
2014	Succeed a simultaneous liver-kidney transplantation from the brain-dead donor

Kyungpook National University Hospital

- **Address** 130 Dongdeok-ro, Jung-gu, Daegu, Korea
- **Homepage** http://eng.knuh.kr/main/
- **Tel** 82-53-200-6114 (English 5016, Chinese 5161, Japanese 5922)

Welcome to Kyungpook national university hospital.
Kyungpook national university hospital (KNU) was opened to the public in 100 years ago when the western medical science arrive in Korea. With numerous clinical research and diagnoses, we have lead the way in developing the medical field overall and remained as one of the best medical institute for the community. After unification with ChilGok branch and KNU dentistry clinic, we want to renovate all of our facilities into global KNU hospital, based on our long solid reputation. With our long history and heritage, KNU medical center will set up utmostly advanced medical system under the partnership from Cancer clinic, ChilGok branch and KNU dentistry clinic. Hundred years' worth of history, medical research, educational support by university faculty and mixture of high techonology medical equipment will make KNU hospital into a global medical institute.

All staff of KNU hospital will keep pleasant and convenient medical circumstances to satisfy our beloved visitors.

- Tertiary Care Teaching Hospital (Established in 1910)
- 555 doctors
- 667 Nurses and 751 Staffs
- 36 Departments and 7 Centers
- 900 Beds
- Organ Transplantation Center (Designated in 2012)

Services of International Healthcare Center

	English	Chinese	Russian	Mongolian	Japanese	Arabic	French
Communication	○	○	○		○		
Medical Form							
Information (leaflet)	○	○			○		
Signage							
Facilities for foreign patients							
Meal for foreign patients							

For inquiries: 82-53-200-5016 (knuh200@hanmail.net)

Outcomes of Kidney Transplantation

Kyungpook National University Hospital has performed the largest number of kidney transplants among local provinces during the last 10 years. The rate of 1 year survival of the graft kidney is 98.6% which is higher than American organ transplant association's statistics, which rates 96.5%. Our institution's 5 year graft survival 91.3% and 10 year graft survival 86.8% is higher than America's 5 year graft survival 82.8% and 10 year graft survival 61.2%. We are also proud to say that our hospital's transplant team has a 100% survival rate of high risk kidney transplant. Ongoing active research in renal transplant and patient specific studies are actively in progress.

Tangible achievement of study

Kyungpook National University Hospital's department of nephrology has reported that the dosage of Tacrolimus, which is an important immune suppressant for kidney transplant recipients, should be individualized according to different genotype. CYP3A5 genotype is associated with Tacrolimus drug metabolism and different genotypes result in Tacrolimus concentration variation. This is the first study to report CYP3A5 genotypes of Koreans and its' relation with Tacrolimus concentration and metabolites. Professor Chan Duck Kim from the nephrology department, was the first to report that the FCM based measurement is the most objective method in checking the antibody titer in cases of ABO incompatible kidney transplant. Our institute is the first in Korea to utilize this method in desensitization therapy.

- Immunologic Monitoring of T-lymphocyte Subsets and HLA-DR Positive Monocytes in Kidney Transplant Recipients. Medicine. 2015.
- Successful withdrawal of antiviral treatment in kidney transplant recipients with chronic hepatitis B viral infection. Transplant Infectious Disease. 2014.
- KNOW-KT (KoreaN cohort study for outcome in patients with kidney transplantation: a 9-year longitudinal cohort study): study rationale and methodology. BMC Nephrology 2014
- CYP3A and ABCB1 Genetic Polymorphisms on the Pharmacokinetics and Pharmacodynamics of Tacrolimus and Its Metabolites (M-I and M-III). Transplantation. 2013
- The impact of A (H1N1)pdm09 infection on renal transplant recipients: A multicenter cohort study. Journal of Infection. 2012.
- Cardio-cerebrovascular medicine/appliance development, clinical evaluation and clinical research foundation establishment (2015.03.16-2023.09.15 Research Hospital R&D)
- Rejection and long term survival study using proteomics/metabolomics for biomarker identification and monitoring method establishment (2013.09.01-2019.08.31 Ministry of Health and Welfare)
- Advanced metabolomics method in use for renal failure treatment (2010.06.30-2015.06.29 Medical-Advanced Science Technology Development Project)

History of Organ Transplantation Center

Year	Major Events
January, 1981	First local hospital to perform kidney transplantation
March, 2006	First hospital in the Daegu Kyungpook province to perform cross matching positive kidney transplant
February, 2012	ABO blood type incompatible kidney transplant performed
March, 2013	Successful kidney transplant from the oldest cadaveric kidney donor in Korea
September, 2014	Successful organ transplant from the oldest cadaveric donor in Daegu Kyungpook province
December, 2014	Performed the largest number of local kidney transplant in 10 years

National Cancer Center

- **Address** 323 Ilsan-ro, Ilsandong-gu, Goyang-si, Gyeonggi-do, Korea
- **Homepage** http:// ncc.re.kr/english/index.jsp
- **Tel** 82-31-920-1070

Ever since its inception in 2000, the National Cancer Center has persevered to lessen the burden of cancer for Koreans by conducting and offering assistance to cancer research, diagnosing and treating cancer patients, assisting in the National Cancer Control Initiatives, and finally, educating and training cancer specialists. Moreover, the NCC is aggressively backing the government's 2nd "10-year Cancer Control Plan (2006)" by devising cancer control policies, promoting cancer research in Korea, and by strengthening the cooperative network forged between Korean cancer-specialized medical institutions and international organizations. The NCC, under the aegis of the Ministry of Health & Welfare, has launched the B&D program for Cancer Therapeutics, a virtual oncology drug development initiative to bridge the gap between finding drug candidates for cancer treatment and translating them into therapeutics. We transform what we learn in the process of studying cancer, patients, and new cancer drugs and technologies into clinically applicable knowledge.

Through our leading clinical system, the NCC is doing its utmost to provide prompt and comfortable medical services. Also every patient at the NCC receives quality care. Our commitment to our patients is embodied in the establishment of ten organ-specific centers and live function-specific centers. Staffed by a full range of cancer specialists from medical, surgical, and oncologists to oncology nurses and technicians, each center offers customized care for cancer patients through coordinated consultations and treatments. In a clinic furnished with the most advanced medical equipment, including Proton Therapy, Tomotherapy, IMRT(Intensity-Modulated Radiation Therapy), CT Simulator, PET/CT(Positron Emission Tomography/Computed Tomography), and the Robot Surgery System(da Vinch S), our highly skilled and experienced surgeons and physicians offer minimally invasive surgeries and targeted chemotherapy. Especially as one of the most advanced forms of radiation therapy available, the proton beam therapy allows physicians to irradiate tumors with higher doses of radiation while minimizing the adverse effects on the healthy tissues surrounding them. This treatment has turned out to be highly effective, particularly for cancers of the prostate, brain, and eyes, achieving superior efficacy with minimal side effects.
Our goal is to be one of the world's best cancer centers by developing a new paradigm in cancer research, rendering the best quality care to cancer patients and functioning as an educational and training hub for the next-generation cancer specialists. With high-caliber professionals, state-of-the-art equipment and facilities, and an innovative management system, NCC will become a national center in the struggle to conquer cancer.

- Tertiary Care Teaching Hospital(Established in 2000)
- 75 doctors
- 559 Nurses and 502 Staffs
- 3 Departments and 15 Centers
- 556 Beds and 10 Beds for only foreign patients
- Organ Transplantation Center (Designated in 2004)
- International Healthcare Center

Services of International Healthcare Center

	English	Chinese	Russian	Mongolian	Japanese	Arabic	French
Communication	○						
Medical Form	○						
Information (leaflet)	○						
Signage	○						
Facilities for foreign patients	Beds for only foreign patients, Lounge, Prayer Room						
Meal for foreign patients							

For inquiries: 82-31-920-1070 (berrycool@ncc.re.kr)

All of the doctors, nurses, and staff members at National Cancer Center are well trained and ready to help patients through discussing their illnesses as well as possible treatments. National Cancer Center will do our best to use our knowledge and experience to help patients with their treatment. For those who are seeking a cure for cancer, please visit us to find out which treatment is appropriate for you. Especially proton therapy is useful because it can effectively treat patients with minimal side effects. Although PBT is particularly useful for treating cancer in children, it can also be used to treat cancers in adults, including liver cancer, lung cancer, and prostate cancer. Furthermore, chordoma and eye melanoma are best alleviated when treated with PBT. We have a coordinator who would assist you with any questions.

Outcomes of Liver Transplantation

The hospital performs more than 70 living donor liver transplants per year and is specialized in living donor liver transplantation for liver cancer patients; for example, the liver transplants for liver cancer patients carried out in this hospital account for more than 80% of such transplants in Korea. Recently, it achieved a successful liver transplant from the oldest donor in Korea (76 years) and has reported this to the academic community. It is also performing a relatively large number of blood type mismatch liver transplantations, representing 20% of all patients. This hospital still records a 100% success rate. It has reported to the academic community on its success in transplanting a small sized liver graft from a donor with a small sized liver to a beneficiary.

History of Organ Transplantation Center

Year	Major Events
2005. 1.14	The first liver transplant at the national cancer center
2008. 9. 3	Achieved 100 cases of liver transplant
2010. 2. 8	Achieved 200 cases of liver transplant
2011. 6. 1	Achieved 300 cases of liver transplant
2012. 1.18	Performed ABO incompatibility liver transplant
2014. 3. 3	Achieved 500 cases of liver transplant
	Performing more than 70 liver transplants per year since 2008

Pusan National University Yangsan Hospital

- **Address** 20, Geumo-ro, Mulgeum-eup, Yangsan-si, Gyeongsangnam-do, Korea
- **Homepage** http:// www.pnuyh.or.kr
- **Tel** 82-55-360-2011

Pusan National University Yangsan hospital is the largest nation's medical complex consisting of University Hospital, Children's Hospital, Rehabilitation Hospital, Neurology Center and Korean Medicine Hospital, Dental Hospital which were established as each specialized hospital in independent type in 2008. The hospital provides the best medical service with the infrastructure for treatment such as excellent medical staff and Electronic System for Total Care(YES), PACS, logistics automation system, etc.
It has been acknowledged as "the most safest hospital in the world" through the JCI(Joint Commission International) accreditation and reaccreditation in 2010 and in 2013 and operated with 12 specialized centers like Cardiovascular Center, Transplantation Center, International Health Care Center, and 24 specialized clinics.
In addition, systemic and effective infrastructure for research and research support have been built through the cooperation with Pusan National University Yangsan Campus, H.W Biomedical Research Institute and a venture company. Therefore, the hospital has been recognized as a leader in the areas of medical education and research. Public welfare is also increased by expanded medical supports for undeserved population through the medical service for doctorless village and for patients in developing countries.

- Tertiary Care Teaching Hospital(Established in 2008)
- 368 doctors
- 1,061 Nurses and 493 Staffs
- 26 Departments and 12 Centers
- 1,235 Beds
- Organ Transplantation Center(Designated in 2009)
- International Healthcare Center

Services of International Healthcare Center

	English	Chinese	Russian	Mongolian	Japanese	Arabic	French
Communication	○	○	○	○	○		
Medical Form	○	○	○				
Information (leaflet)	○	○	○				
Signage	○		○				
Facilities for foreign patients	Lounge						
Meal for foreign patients	Western						

For inquiries: 82-55-360-2011 (hyeyoung@pnuyh.co.kr)

The International Healthcare Center (IHC) at Pusan National University Yangsan Hospital opened in May 2010 and provides professional interpreters for speakers of English, Russian, Chinese, Japanese, and Mongolian. This personalized 1:1 service is designed to assist patients and/or their families in preparing for entry to Korea and initial consultations via e-mail or phone. Our comprehensive services include pick-up from the airport upon arrival, interpretation and guidance throughout the entire treatment process, and transportation to the airport on the day of departure. Follow-up care includes monitoring patient medications and condition, and is a major reason for our very high patient satisfaction

Outcomes of Liver Transplantation

We performed more than 200 cases of liver transplantation (LT) for the first 5 years after establishment of organ transplantation center and our institution became one of the major LT center in Gyeongnam district in Korea. Overall 3-year survival rate after LT is 85.3% and overall 3-year survival rate after living donor LT is 93.5%. In terms of LT for hepatocellular carcinoma, overall 3-year survival rate is 92.1% and disease-free survival rate is 78.8%. We also developed our own technique named as CMPRL graft to procure liver graft from living donor and try to simplify and standardize LT procedure.

As a result of risk factor analysis for recurrence of hepatocellular carcinoma (HCC) after LT, we newly defined HCC recipient selection criteria (A-P 200 criteria) for LT. According to these criteria, 3-year oveall survival rates among the patients who fulfilled or exceeded the A-P 200 criteria were 89.2% and 90.3%, respectively. The 3-year recurrence-free survival rates among the patients who fulfilled or exceeded the A-P 200 criteria were 90.0% and 43.6%, respectively, and this difference was statistically significant. These criteria might be useful for expanding the selection criteria for LT among patients with HCC, in order to identify all patients who might experience a significant benefit.
We also actively apply downstage treatment for the patients with advanced HCC including those who exceed A-P 200 criteria before LT. In our study, 3-year recurrence-free survival rates among the patients who underwent downstage treatment or did not were 94.1% and 53.2%, respectively, and this result was statistically significant. Among 18 patients who underwent downstage treatment before LT, only one patient developed recurrence of HCC during follow-up period. Thus, we think that our treatment strategy could change unfavorable tumor biology to favorable one and achieve better outcome.

Tangible achievement of study

- Open label, Multi-center, Randomized Study to Compare the Safety and Efficacy of Tacrolimus and Steroids in Combination with Mycophenolate Mofetil or Without Mycophenolate Mofetil in Liver Transplantation with Hepatitis B Virus (HBsAg) Positive.
- Efficacy of downstaging before liver transplantation for hepatocellular carcinoma patients at high risk of recurrence
- Modified Extended Right Lobe graft for Living Donor Liver Transplantation

As a result of our efforts for simplification and standardization of LT procedure, our team developed CMPRL graft technique to procure liver graft from living donor. From our study of the CMPRL graft, living donor LT using CMPRL graft is relatively safe procedure for live liver donors, and there are many benefits such as decrease of operation and ischemic time, convenience of operation, and more favorable maintenance of hepatic venous patency. Now we planned to experience more LT cases with CMPRL graft and hope general application of this procedure as a kind of standardization of LT procedure.

- Caudal middle hepatic vein trunk preserved right lobe graft in living donor liver transplantation, Annals of Surgical Treatment and Research, 2014
- A Case of Acute Graft versus Host Disease after Liver Transplantation, the Journal of the Korean Society for Transplantation, 2013
- A First Experience of Rh (D) Incompatible Living Related Liver Transplantation in Korea, the Korean Journal of Blood Transfusion, 2012

History of Organ Transplantation Center

Year	Major Events
2010	– Center for Organ Transplantation
2011	– Foreigners living donor liver transplantation (USA, Mongolia, New Zealand)
2012	– Seong-san Chang Kee-ryo Award: Liver transplant team – Also the only region other than Lung transplantation
2013	– 100 cases of liver transplantation to achieve the shortest possible time domestic
2014	– Heart transplantation – Cardiopulmonary transplantation simultaneous chapter – Foreign liver transplant training: Russia, Indonesian, Laos, Myanmar
2015	– Achieving 200 liver transplant patients – Simultaneous pancreas kidney transplant – Foreigners living donor liver transplantation (Uzbekistan, Ethiopia) – Viet Duc Hospital and the MOU for a liver transplant medical technology and medical training – Indonesia Adam Malik Hospital (H. Adam Malik National Hospital) and liver transplant medical technology and medical training MOU signed

Samsung Medical Center

- **Address** 81 Irwon-Ro Gangnam-gu. Seoul, Korea
- **Homepage** http:// english.samsunghospital.com/main/english.do
- **Tel** 82-2-3410-0200

The Samsung Medical Center was founded on November 9, 1994 under the philosophy of "contributing to improving the nation's health through the best medical service, advanced medical research, and development of outstanding medical personnel." The Samsung Medical Center consists of a hospital and a cancer center. The hospital is located in an intelligent building with floor space of more than 200,000 square meters and 20 floors aboveground and 5 floors underground, housing 40 departments, 10 specialist centers, 120 special clinics, and 1,306 beds. On the other hand, the 655-bed Cancer Center has 11 floors aboveground and 8 floors underground, with floor space of over 100,000 square meters. SMC is a tertiary hospital manned by approximately 7,400 staff including over 1,200 doctors and 2,300 nurses. Since its foundation, the Samsung Medical Center has successfully incorporated and developed an advanced model with the motto of becoming a "patient-centered hospital," a new concept in Korea. Equipped with advanced medical service infrastructure including outstanding medical staff, order communication system (OCS), picture archiving communication system (PACS), clinical pathology automation system, and logistics automation system, SMC is defining a new hospital culture in Korea by being the best hospital in terms of hi-tech medical services and through the provision of genuine patient-centered medical services (shortest waiting time, hospital that does not require guardians). Since March 1997 when it was established to train the students of Sungkyunkwan University's school of medicine, the Samsung Medical Center has admitted 40 of the nation's top students each year to prepare for a bright future at the center. As such, the Samsung Medical Center as a medical institute leading the medical community has become Korea's best hospital in terms of care, research, and education. The Samsung Medical Center considers the next 10 years to be crucial in its bid to become a world-class medical institute and makes all-out efforts and investment in ensuring that it is prepared for the future. To ensure its further growth, the Samsung Medical Center opened the Samsung Cancer Center and Samsung Cancer Lab in 2008 and 2009, respectively; it is set to open the Samsung International Medical Center in 2015.

- Tertiary Care Teaching Hospital(Established in 1994)
- 1,360 doctors
- 2,620 Nurses and 7,700 Staffs
- 140 Departments and 10 Centers
- 1,983 Beds and 19 Beds for only foreign patients
- Organ Transplantation Center
- International Healthcare Center

Services of International Healthcare Center

Opened in September 1995, International Health Services offers inpatient and outpatient treatments, consultations, and referrals across a comprehensive range of specializations. The service is a major component of the Samsung Medical Center's Seoul hospital, one of the country's leading health care institutions. Samsung Medical Center is well received among foreign residents for its outstanding medical and nursing staff and for its proficient services. International Health Services has put into effect the cashless service with certain companies, main embassies, foreign schools, and US army hospitals for the convenience of foreign patients visiting IHS. In addition, IHS has become the undisputed no. 1 International clinic within Korea, with a large portion of foreign patients residing in Korea as well as those residing in other parts of Asia and Middle East visiting the clinic each year.

	English	Chinese	Russian	Mongolian	Japanese	Arabic	French
Communication	○	○	○	○	○	○	
Medical Form	○						
Information (leaflet)	○	○	○	○	○	○	
Signage	○						
Facilities for foreign patients	Beds for only foreign patients, Lounge, Prayer Room						
Meal for foreign patients	Russian, Arabic, Mongolian						

For inquiries: 82-2-3410-0200 (ihs.smc@samsung.com)

Outcomes of Liver Transplantation

Starting with its first liver transplantation in June 1996 after its foundation, a total of 1,608 liver transplant surgeries have been performed as of March 30, 2014. It maintains the best level surgery performance in the field of liver transplants using small sized graft and bloodless liver transplantation. Through close cooperation with the division of gastroenterology and other divisions led by the liver transplantation center, it ensures convenience and promptness for cirrhosis and liver cancer patients, and delivers integrated treatment across the divisions, to support after-surgery liver transplantation patients and treat complications.

Since May 2013, it has been successfully performing laparoscopic liver transplantation (20% of living donor liver transplantation cases in 2014).

History of Organ Transplantation Center

Year	Major Events
1994.12.	SMC Organ Transplant Center Open
1999.12.25	(Domestic) 1st Allograft Islet Transplantation
2004.03.	Tissue Bank open
2012.04.27	Symposium for 1,500 kidney transplants (live surgery)
2013.05.20	First successful living donor liver laparoscopy (right lobe of liver)
2014.10.02	Symposium for 1,500 kidney transplants (live surgery - laparoscopic donor hepatectomy)
2014.10.16	Achieved success in DDLT after the application of bioartificial liver

Outcomes of Kidney Transplantation

Beginning with its first kidney transplant in February 1995, it has performed a total of 1,967 kidney transplants as of March 30, 2014. It performs kidney transplants for patients classified in the middle to high risk groups in terms of immunology, including blood type mismatch kidney transplants and highly sensitive patient kidney transplants. It also applies a proprietary kidney exchange transplant program for patients with difficulties in sibling transplantation due to incompatibility in blood type or tissue adequacy in order to identify the optimal donor for better transplantation potential and reduce the waiting time. In addition, it has achieved success in stopping the administration of immunosuppressants through the transplantation of kidney and marrow at the same time to induce immune tolerance, and is still operating an immune tolerance induction program. Immune tolerance induction is the ultimate goal for the management of organ transplantation patients, and only a few medical institutions in the world have achieved success in this area.

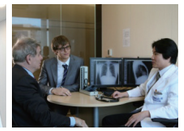
Seoul National University Hospital

- **Address** 101 Daehak-ro, Jongno-gu, Seoul, 03080, Korea
- **Homepage** http://snuh.org/english
- **Tel** 82-2-2072-0505

For more than a century, Seoul National University Hospital (SNUH) has been the pioneer of western medicine in Korea, and has cared the health of Korean citizens, playing its role of the nation's central hospital. With over 1,700 beds, SNUH provides reliable top-quality medical service to over 8,000 outpatients and about 1,700 inpatients every day. SNUH has also transformed the facility into a digital hospital with new IT (information technology) infrastructures in 2004. SNUH consists of main hospital, children's hospital, cancer hospital, and Biomedical research institute with over 500 medical professors and about 6,000 staff members. In 2011, the hospital received <No. 1 Accreditation of Healthcare Quality & Patient Safety> from Korea's Ministry of Health & Welfare. Also, SNUH was selected as the no. 1 hospital for maintaining <Korea Brand Power Index> for the 15th consecutive year in 2015. SNUH lead Korean medical field as education hospital for training doctors to become specialists and as research centered hospital for publishing approximately 2,400 articles in world's prominent SCI journals every year. International Healthcare Center (IHC) was expanded in 2010 and it provides One-stop service including interpretation service to international patients.

- Tertiary Care Teaching Hospital(Established in 1978)
- 2,425 doctors
- 4,022 Nurses and 3,951 Staffs
- 40 Departments and 30 Centers
- 1,792 Beds
- Organ Transplantation Center(Designated in 2005)
- International Healthcare Center

Services of International Healthcare Center



	English	Chinese	Russian	Mongolian	Japanese	Arabic	French
Communication	○	○	○	○	○	○	○
Medical Form	○						
Information (leaflet)	○	○	○	○	○	○	
Signage	○	○					
Facilities for foreign patients	Lounge						
Meal for foreign patients	Arabic, Western						

For inquiries: 82-2-2072-0505 (international@snuh.org)

The International Healthcare Center (IHC) at SNUH has striven to provide world-class medical care and services. The knowledge and experience we gained by assisting overseas patients has instructed us on making your time here at SNUH as comfortable as possible. We offer various services including hospital consultation arrangements, general health check-ups, physical examinations for VISA, child & adult immunizations, travel vaccinations, and management of other medical conditions. In addition, we have specialized clinics inside our center with consultants in various fields. For medical evaluation or consultation on a specific condition, we will arrange your appointments with corresponding departments.

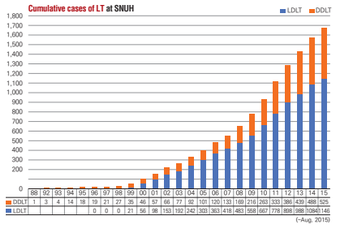
History and Achievement of Organ & Blood and Marrow Transplantation Center

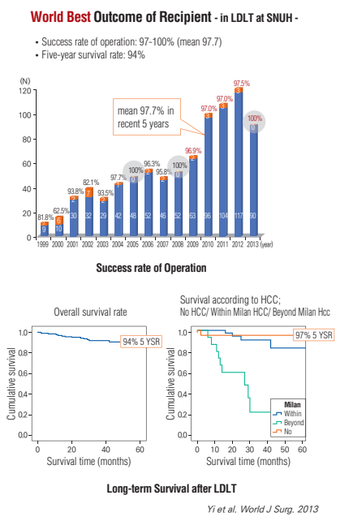
Year	Major Events
1985.11	First successful allogeneic stem cell transplantation at SNUH
1992.12	First autologous stem cell transplantation at SNUH
1999. 7	First haploidentical familial donor stem cell transplantation
2002.11	First cord-blood stem cell transplantation
2007.12	Hematopoietic stem cell transplantation outnumbered 100/year
1969. 7	Seoul National University Hospital performs its first kidney transplant
1988. 3	Achieved first successful deceased liver transplant in Korea
1992. 4	Achieves successful kidney transplantation for youngest patient (2 years and 3 months) in Korea
1994. 3	Achieves the first successful remote heart transplantation in Korea
1996. 9	Seoul National University Hospital performs its first lung transplantation
1996. 1	First autologous hematopoietic stem cell transplantation (HSCT) in AML
1997.10	Seoul National University Hospital performs its first simultaneous heart and lung transplantation
1998.11	Achieved first successful brain deceased split liver transplantation in Korea
1998. 1	First allogeneic HSCT in chronic myelogenous leukemia
1998. 8	First umbilical cord transplantation in Fanconi anemia
1999.11	First successful adult living donor liver transplantation using right posterior segment in the world
2001. 7	Achieved successful kidney transplantation for Korea's youngest low birth weight baby patient (14 months, 7.5kg)
2002. 4	Seoul National University Hospital performs its first simultaneous kidney and pancreas transplantation
2004.11	Seoul National University Hospital performs its first simultaneous kidney and liver transplantation
2004.8.	First umbilical cord transplantation with 2 units in AML

2007. 4	First successful laparoscopy-assisted donor right hepatectomy in the world
2008. 6	First successful liver transplantation of the youngest infant (two-month-old) in Korea
2008. 7	Achieved first successful liver transplantation from a deceased rather than a brain deceased donor in Korea
2009. 1	First HSCT with targeted dose of busulfan
2010. 7	Achieved the first successful lung transplantation for an end stage lung cancer patient in Korea
2011. 6	1,000th liver transplantation at SNUH
2012. 4	Achieved 100 heart transplantations
2013.11	Achieved successful multi-organ transplantation (Liver, stomach, duodenum, small intestine, pancreas, etc.)
2013. 8	Achieved 1,800 kidney transplantations
2014. 2	1,000th living donor liver transplantation at SNUH
2014. 6	1,500th liver transplantation at SNUH
2014. 1	First haploidentical HSCT with post-cyclophosphamide
2015. 3	Performed over 2,050 cases of kidney transplantation, over 1,580 cases of liver transplantation, over 140 cases of heart transplantation, over 30 cases of lung transplantation and over 45 cases of simultaneous kidney and pancreas transplantation every year
2015. 3	Allogeneic stem cell transplantation more than 900 cases, Autologous stem cell transplantation more than 800 cases Stem cell transplantation more than 150 cases annually

Outcomes of Liver Transplantation

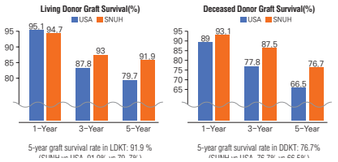
Since March 1988 of the first successful liver transplantation (LT), the team of LT at SNUH has accomplished a lot of history and achievements as well as the first successful world records including donor hepatectomy using right posterior section (1999), laparoscopy-assisted donor right hepatectomy (2007), artificial vascular graft in living donor LT (LDLT) (2007), etc. At SNUH, the 1,000th LDLT was in February 2014, and 1,500th LT was in June 2014. In particular, LDLT, accounting for two-thirds of LT, has been achieving excellent outcomes of patient's survival as well as the number of operations. In recent 5 years, success rate of operation showed 97.0 to 100.0% (mean 97.7%) as the world best outcome. In adult LDLT, 5-year survival rate was 94.0% in overall, and 97.0% in patients who underwent LT for liver disease without hepatocellular carcinoma.





Outcomes of Kidney Transplantation

Since July 1969 of Korea's first kidney transplant (KT), the team of KT at SNUH has notable achievements including multiple organ transplantation (kidney-pancreas, kidney-liver, kidney-heart), ABO incompatible KT and KT after desensitization in both living donor and deceased donor KT. The cumulative KT cases exceeded 2050 cases now. KT team of SNUH showed better outcomes than hospital in the USA. In recent, 5 year graft survival rate of LDKT and DDKT were 91.9 % and 76.7% in overall, 20 year graft survival rate of KT has reached more than 60%. In addition, the Korea's first pediatric KT performed successfully under the age of 10 at 1984 and the cumulative pediatric KT cases up to 300 have been performed since then. As well, the outcomes of pediatric kidney transplantation in our hospital showed better than that in North America.



Outcomes of Bone Marrow Transplantation

From 1996, we have performed more than 800 hematopoietic stem cell transplantations in children. Candidates of hematopoietic stem cell transplantations at our center include acute leukemia, lymphoma, brain tumor, solid tumors and non-malignant disorders including immune deficiencies and neurodegenerative diseases. Donors include not only autologous, matched related allogeneic, matched unrelated allogeneic, cord blood, but also haploidentical donors. Currently, we are performing around 80 cases of hematopoietic stem cell transplantations annually.

We are performing more than 150 cases of stem cell transplantation annually. We perform allogeneic stem cell transplantation using various donors such as cord blood, familial haplo-mismatched donor. Transplant related mortality rate of autologous stem cell transplantation is less than 5% in our center.

Tangible achievement of study

Liver Transplantation

- Diagnostic method development of metastatic HCC for the HBIG treated patient after LT.
- Study for various polymorphisms of donor and recipients in LT.
- The study of the effect of various immunosuppressants on ischemic bile duct injury in animal model.

The team of LT at SNUH is interested in new therapeutic or technical aspects for clinical and surgical advances in LT (especially in LDLT) and basic researches related to LT. Particularly, we have been interested in following topics: living donor safety and minimally invasive donor hepatectomy, technical aspect and outcome of LDLT, biliary complication especially in LDLT, hepatocellular carcinoma in LT, hepatitis B virus control, and pediatric LT. As the results, we have accomplished a lot of achievements of basic and clinical research in LT. There are over 150 published papers since 2000 and over 30 ongoing basic and clinical studies. Representative published papers and ongoing researches are as below.

- Adult living donor liver transplantation using right posterior segment. Transpl Int. 2003
- Active immunization against de novo hepatitis B virus infection in pediatric patients after liver transplantation. Hepatology. 2003
- An artificial vascular graft is a useful interpositional material for drainage of the right anterior section in living donor liver transplantation. Liver Transpl. 2007.
- Laparoscopy-assisted donor right hepatectomy using a hand port system preserving the middle hepatic vein branches. World J Surg. 2009.
- The right posterior bile duct anatomy of the donor is important in biliary complications of the recipients after living-donor liver transplantation. Ann Surg. 2013

Kidney Transplantation

- KOTRY (Korean Organ Transplant Registry)
  - Data collection of recipient, donor in domestic kidney transplantation
  - To establish a national organ transplant cohort
  - To identify prognostic factors associated with long-term outcomes of KT
- Verifying the validity of experiments in xeno-transplantation model using transforming cloned pig or primates.
  - To search for the methods to maximize the survival rate after xeno-transplantation
- Predictive model of tacrolimus concentration using pharmacokinetics
  - To reduce the number of blood tests
  - To develop a method for measuring concentrations of KT patient in Korea

The team of KT at SNUH has upgraded the level of clinical research, basic researches related to KT, and standard guideline of KT including medical and surgical management. We have been interested in following topics: Xeno-transplantation, mechanism of kidney injury, new biomarker signified a kidney injury or rejection after KT, pediatric KT, etc. We have accomplished a lot of achievements of basic and clinical research in KT. There are over 70 published papers since 2011 and ongoing researches.

- Park SJ, Cho B, Koo OJ, Kim H, Kang JT, Hurh S, Kim SJ, Yeom HJ, Moon J, Lee EM, Choi JY, Hong JH, Jang G, Hwang JI, Yang J, Lee BC, Ahn C: Production and characterization of soluble human TNFRI-Fc and human HO-1(HMOX1) transgenic pigs by using the F2A peptide. Transgenic Res. 2014;23(3):407-19.
- Shin JS, Kim JM, Kim JS, Min BH, Kim YH, Kim HJ, Jang JY, Yoon IH, Kang HJ, Kim J, Hwang ES, Lim DG, Lee WW, Ha J, Jung KC, Park SH, Kim SJ, Park CG. Long-Term Control of Diabetes in Immunosuppressed Nonhuman Primates (NHP) by the Transplantation of Adult Porcine Islets. Am J Transplant. 2015 Jun 10. doi: 10.1111/ajt.13345. [Epub ahead of print]
- Yang J, Lee J, Huh KH, Park JB, Cho JH, Lee S, Ro H, Han SY, Kim YH, Jeong JC, Park BJ, Han DJ, Park SB, Chung W, Park SK, Kim CD, Kim SJ, Kim YS, Ahn C, KNOW-KT Study Group: KNOW-KT (KoreaN cohort study for outcome in patients with kidney transplantation: a 9-year longitudinal cohort study): study rationale and methodology. BMC Nephrol. 2014; 15:77.
- Min SI, Ha J, Kang HG, Ahn S, Park T, Park DD, Kim SM, Hong HJ, Min SK, Ha IS, Kim SJ. Conversion of twice-daily tacrolimus to once-daily tacrolimus formulation in stable pediatric kidney transplant recipients: pharmacokinetics and efficacy. Am J Transplant. 2013 Aug;13(8):2191-7.
- Min SI, Ha J, Kim YS, Ahn SH, Park T, Park DD, Kim SM, Min SK, Hong H, Ahn C, Kim SJ: Therapeutic equivalence and pharmacokinetics of generic tacrolimus formulation in de novo kidney transplant patients. Nephrol Dial Transplant. 2013 Sep 30.

Bone Marrow Transplantation

- Targeted busulfan studies to meet the narrow therapeutic window of busulfan.
- Pharmacokinetic studies on conditioning chemotherapy to optimized dosing.
- Studies on prophylaxis and treatment of veno-occlusive disease.

Outcome of our transplantation has improved with the use of targeted busulfan. We are continuously striving to improve our outcomes with various studies including pharmacokinetic studies on conditioning chemotherapeutic agents, studies on prophylaxis and treatment of veno-occlusive disease.

- Addition of aprepitant to ondansetron with or without dexamethasone is effective for the prevention of chemotherapy-induced nausea and vomiting in paediatric patients being treated with moderately or highly emetogenic chemotherapy. (Aprepitant for the prevention of chemotherapy-induced nausea and vomiting in children: a randomised, double-blind, phase 3 trial. Kang HJ, Loftus S, Taylor A, DiCristina C, Green S, Zwaan CM. Lancet Oncol. 2015 Apr;16(4):385-94.)
- High-dose chemotherapy and autologous stem cell transplantation with melphalan, etoposide and carboplatin may be a promising treatment option for high-risk osteosarcoma. (High-dose chemotherapy and autologous stem cell transplantation with melphalan, etoposide and carboplatin for high-risk osteosarcoma. Hong CR, Kang HJ, Kim MS, Ju HY, Lee JW, Kim H, Kim HS, Park SH, Park KD, Park JD, Shin HY, Ahn HS. Bone Marrow Transplant. 2015 Jun 22.)
- Hematopoietic stem cell transplantation (HSCT) using a targeted once-daily intravenous busulfan-fludarabine-etoposide regimen showed favorable outcomes and could be an option for HSCT in pediatric and infant acute lymphoblastic leukemia. (Favorable outcome of hematopoietic stem cell transplantation using a targeted once-daily intravenous busulfan-fludarabine-etoposide regimen in pediatric and infant acute lymphoblastic leukemia patients. Lee JW, Kang HJ, Kim S, Lee SH, Yu KS, Kim NH, Jang MK, Kim H, Song SH, Park JD, Park KD, Shin HY, Jang IJ, Ahn HS. Biol Blood Marrow Transplant. 2015 Jan;21(1):190-5.)
- Allogeneic stem cell transplantation in patients with de novo diffuse large B-cell lymphoma who experienced relapse or progression after autologous stem cell transplantation: a Korea-Japan collaborative study Ann Hematol. 2014 Aug;93(8):1345-51. doi: 10.1007/s00277-014-2045-9. Epub 2014 Mar 16.
- Mitoxantrone, etoposide, cytarabine, and melphalan (NEAM) followed by autologous stem cell transplantation for patients with chemosensitive aggressive non-Hodgkin lymphoma Am J Hematol. 2012 May;87(5):479-83. doi: 10.1002/ajh.23150. Epub 2012 Mar 3

Severance Hospital, Yonsei University College of Medicine

- **Address** 50-1 Yonsei-ro, Seodaemun-gu, Seoul, Korea
- **Homepage** http:// www.yuhs.or.kr/en/
- **Tel** 82-2-2228-5817

Established in 1885 as Korea's first institution to practice and teach western medicine, Severance Hospital has lead many of those developments. Severance Hospital operated its International Health Care Center since 1962. Also it was the hospital to be first accredited in Korea by Joint Commission International (JCI) in 2007. Based on more 120 years of experience in medicine, Severance Hospital will strive to be a leader in the industrialization and globalization of medicine, thus helping it to achieve its goal of becoming the medical hub of Northeast Asia.

- Tertiary Care Teaching Hospital(Established in 1885)
- 1,271 doctors
- 2,822 Nurses and 2,377 Staffs
- 54 Departments and 23 Centers
- 2,471 Beds and 21 Beds for only foreign patients
- Organ Transplantation Center (Designated in 2000)
- International Healthcare Center

Services of International Healthcare Center

	English	Chinese	Russian	Mongolian	Japanese	Arabic	French
Communication	○	○	○	○	○	○	
Medical Form	○	○	○		○	○	
Information (leaflet)	○	○	○		○	○	
Signage	○	○	○		○		
Facilities for foreign patients	Beds for only foreign patients, Lounge, Prayer Room						
Meal for foreign patients	Russian, Arabic						

For inquiries : 82-2-2228-5817 (medseverance@yuhs.ac)

The International Health Care Center(IHCC) at Severance Hospital first opened its office in 1962 to fulfill growing international health care needs in Korea. The Center is staffed with multiple language speaking professionals (e.g. English, Russian, Chinese and Arabic). In addition to offering primary care services, it refer oversea patients to specialists throughout the hospital for additional needs.
The specialized care and the constant monitoring and support of the International Health Care Center staff ensure that oversea patients visiting Severance Hospital
have the best possible environment in which to get the treatment they need.

Outcomes of Liver Transplantation

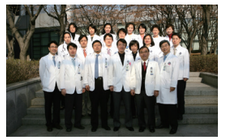
Since the first liver transplantation in 1996, the Severance hospital Liver Transplantation (LT) program has been continuously growing to meet global standards. In 2003, we succeeded in dual donor LT for a patient who suffered from liver failure but had no suitable single donor. One of the strengths of our LT program is strong multi-disciplinary approach among the various departments related to LT, which can generate better results after high-risk operation such as LT for far-advanced HCC (liver cancer) and combined transplantations. Our recent 3-year operation success rate of living donor LT is 94.4%, which is better than the world reported results.
Moreover, the 3-year graft survival rate of the hepatocellular carcinoma patients is 91.9%. For these good results, we are making an effort to give the best care to patients before and after transplantation.

History of Organ Transplantation Center

Year	Major Events
1978	Immunology lab establishment
1979. 4	First living donor kidney transplantation
1981	Korea's 1st bone marrow transplantation
1990	First exchange donor kidney transplantation
1994	First adult orthhotopic heart transplantation
1996. 7	Korea's first lung transplantation
1996. 7	First Liver transplantation
2002. 1	Korea's first kidney transplantation with a cross-match-positive donor
2003. 6	Dual graft liver transplantation
2009. 9	Simultaneous liver-kidney transplantation
2010	Achievement of 1000 cases of HSCT
2010. 2	3,000th kidney transplantation
2010. 6	First ABO incompatible kidney transplantation
2012. 1	First ABO incompatible liver transplantation
2015. 5	Korea's first combined liver and lung transplantation from living liver donor and deceased lung donor

Outcomes of Kidney Transplantation

Since the first kidney transplantation in 1979, the Severance hospital Kidney Transplantation (KT) program became the first and single institute in Asia to accumulate a total of 3000 cases in 2010. We have well established desensitization programs for patients with immunologically high risk such as KT from ABO incompatible donor or lymphocyte cross-matching positive donor. Also, we invented a new surgical technique (VAMS) to make small incisions on the living kidney donor. The recent 3-year graft survival rate was 96.9% in living donor KT and 93.7% in deceased donor KT, which is better than the world reported results. For these good results, we are making an effort to give the best care to patients before and after transplantation.



Outcomes of Bone Marrow Transplantation

Since its foundation in 1885, the Division of Hematology at Severance Hospital led the advance of Hematology and Transplantation medicine in Korea. Our specialized clinic was opened in 1973, and with great pride, the first allogeneic hematopoietic stem cell transplantation (HSCT) in Korea was successfully performed at our hospital in 1981. From the beginning, Severance HSCT team established a lot of standards and contributed to the development of transplantation medicine in Korea, as the team is composed of experts from various fields. Profound clinical experience in our team is also fully supported by innumerable outcomes of translational results from our Academy. The first dual transplantation using hematopoietic and mesenchymal stem cell is one of the representative results of our efforts. Since 1981, over 1,000 adult patients have received transplantation. The Severance HSCT ward was fully renovated, extended and upgraded with high-tech facilities in 2006, and over 1,000 adult patients has received transplantation with good results. The Severance HSCT team is the first and the best team in Korea.

Tangible achievement of study

Severance hospital transplant program persistently makes good results in both ways of clinical and academic fields. We are participating and leading in various global multicenter clinical trials. We have the Research institute for transplantation to foster basic and translational research. Over 400 research papers regarding clinical and basic transplant fields were published in our center.
Severance hospital HSCT team has produced research outcomes in both clinical and basic research fields. We are participating in various global multicenter clinical trials and also leading basic research of Hematology in Korea. Our object of research is to improve outcome of transplantation and reduce complication, therefore raising quality of life and survival after transplant.

Liver Transplantation

- CRAD001H2307: Global clinical study. Multicenter, randomized controlled trial
  - Efficacy and safety of Everolimus with reduced tacrolimus in living donor liver transplant recipients
- Improvement of survival and insulin secreting function of islet by coculture with ischemia-reperfusion preconditioned hepatocyte.
  - Funded by National Research Foundation
  - Basic research for ischemia-reperfusion preconditioning of hepatocytes
- Research for modification of emergency status in deceased donor liver allocation- development of revised MELD score system.
  - Funded by Korea Centers for Disease Control and Prevention
  - National policy issues to change Korean organ sharing system

1. The clinical behavior of transplantable recurrent hepatocellular carcinoma after curative resection: implications for salvage liver transplantation. Ann Surg Oncol. 2014; 21(8): 2717-24
2. Statin therapy is associated with the development of new-onset diabetes after transplantation in liver recipients with high fasting plasma glucose levels. Liver Transpl. 2014; 20(5): 557-63
3. Results of ABO-incompatible liver transplantation using a simplified protocol at a single institution. Transplant Proc. 2015; 47(3): 723-6
4. Effect of donor-specific antibodies and panel reactive antibodies in living donor liver transplant recipients. Ann Surg Treat Res. 2015; 88(2): 100-5
5. Impact of coculture with ischemic preconditioned hepatocellular carcinoma cell line (Hep-G2) cells on insulin secreting function of rat insulin-secreting cell line (RIN-5F) cells. Transplant Proc. 2012; 44(4): 1099-103

Kidney Transplantation

- Cohort study for observation of graft outcomes and causes of complication occurrence after kidney transplantation. (Multicenter)
  - Funded by Korea Centers for Disease Control and Prevention
- RECORD study : Multicenter, Open-label, Randomized Study to Evaluate the Saftety and Efficacy of Extended Release Tacrolimus (Advagraf®) + Sirolimus (Rapamune®), versus Extended Releases Tacrolimus (Advagraf®) + Mycophenolate mofetil (MMF) in Kidney Transplant Patients
  - Multicenter, randomize controlled trial
- TRASFORM study : A 24 month, multicenter, randomized, open-label safety and efficacy study of concentration-controlled everolimus with reduced calcineurin inhibitor vs. mycophenolate with standard calcineurin inhibitor in de novo renal transplantation – Advancing renal TRANSplant eFicacy and safety Outcomes with an eveRolimus-besed RegiMen
  - Multicenter, randomize controlled trial

1. Ratio of donor kidney weight to recipient bodyweight as an index of graft function. Lancet 2001; 357: 1180-1
2. Exchange living-donor kidney transplantation: merits and limitations. Transplantation. 2008; 86(3): 430-5
3. Safety and Efficacy of the Early Introduction of Everolimus With Reduced-Exposure Cyclosporine A in De Novo Kidney Recipients. Transplantation. 2015; 99(1): 180-6
4. Everolimus plus reduced-exposure CsA versus mycophenolic acid plus standard-exposure CsA in renal-transplant recipients. Am J Transplant. 2010; 10(6): 1401-13
5. Graft survival after video-assisted minilaparotomy living-donor nephrectomy or conventional open nephrectomy: do left and right allografts differ? Urology. 2014; 84(4): 832-7

Bone Marrow Transplantation

- A Phase III, Double-Blind, Randomized, Placebo-Controlled, Multicenter Clinical Trial to Study the Safety, Tolerability, Efficacy, and Immunogenicity of V212 in Recipients of Autologous Hematopoietic Cell Transplants (HCTs)
- A phase III, randomized, observer-blind, placebo-controlled, multicenter, clinical trial to assess the prophylactic efficacy, safety, and immunogenicity of GSK Biologicals' herpes zoster gE/AS01B candidate vaccine when administered intramuscularly on a two-dose schedule to adult autologous haematopoietic stem cell transplant (HCT) recipients
- A Phase III, Randomized, Placebo-Controlled, Double-Blind Study of Oral MLN9708 Maintenance Therapy in Patients With Multiple Myeloma Following Autologous Stem Cell Transplant

1. Early CMV replication and subsequent chronic GVHD have a significant anti-leukemic effect after allogeneic HSCT in acute myeloid leukemia
   ANNALS OF HEMATOLOGY 94/2 :275-282,2015
2. Risk Factors for Progression from Cytomegalovirus Viremia to Cytomegalovirus Disease after Allogeneic Hematopoietic Stem Cell Transplantation
   BIOLOGY OF BLOOD AND MARROW TRANSPLANTATION 18/6 :881-886,2012
3. Complete Remission Status before Autologous Stem Cell Transplantation Is an Important Prognostic Factor in Patients with Multiple Myeloma Undergoing Upfront Single Autologous Transplantation
   Biology Of Blood And Marrow Transplantation 15/4 :463-470,2009
4. Transfusion-Associated Iron Overload as an Adverse Risk Factor for Transplantation Outcome in Patients Undergoing Reduced-Intensity Stem Cell Transplantation for Myeloid Malignancies
   Acta Haematologica 120/3 :182-189,2008
5. Treatment of high-risk acute myelogenous leukaemia by myeloablative chemoradiotherapy followed by co-infusion of T cell-depleted haematopoietic stem cell
   BRITISH JOURNAL OF HAEMATOLOGY 118/4 :1128-1131,2002 0180303

The Catholic University of Korea Seoul St. Mary's hospital

- **Address** 222 Banpo-Daero, Seocho-gu, Seoul, Korea
- **Homepage** http:// www.cmcseoul.or.kr/global/eng/front
- **Tel** 82- 2-2258-5745

Since its establishment in 1980, Seoul St. Mary's Hospital has strived to treat mental and physical illnesses for almost three decades. In March 2009, it made another great leap forward with a new, cutting-edge infrastructure and Korea's largest newly-built building in order to realize a new medical culture. Having at its center, Catholic Medical Center which led the history of Korean medicine with the philosophy of "respect for life" over the past 80 years, Seoul St. Mary's Hospital, Catholic University of Korea follows in the spirit of Jesus Christ who cares for the poor and the isolated, and thus is providing quality medical services to everyone equally with state-of-the-art infrastructure, and is playing a leading role in the field of medicine in the Republic of Korea.

- Tertiary Care Teaching Hospital(Established in 1980)
- 806 doctors
- 1,954 Nurses and 1,316 Staffs
- 39 Departments and 25 Centers
- 1,339 Beds and 22 Beds for only foreign patients
- Organ Transplantation Center (Designated in 1998)
- International Healthcare Center

Services of International Healthcare Center

	English	Chinese	Russian	Mongolian	Japanese	Arabic	French
Communication	○	○	○		○	○	○
Medical Form	○		○		○		
Information (leaflet)	○	○	○		○	○	○
Signage	○						
Facilities for foreign patients	Beds for only foreign patients, Lounge, Prayer Room						
Meal for foreign patients	Russian, Arabic, Western						

For inquiries : 82- 2-2258-5745-6 (ihcc@catholic.ac.kr)

The center, located at the 3rd floor in the main hospital building, is staffed by doctors, nurses and coordinators who are fluent in English, Arabic, Russian, Japanese, French, Chinese and Korean. The multi-disciplinary medical coordinating team for each of language is dedicated to provide high-quality medical services to international patients in an atmosphere of comfort and assurance. When patients need further consultations in specialty departments or specialized centers, they will be referred with appropriate interpreting services and continuous support from the staffs of the International healthcare Center. Also the center offers international patients the direct billing claim settlement services with affiliated insurance companies which promote patients` convenience through providing direct payment.

History of Organ & Blood and Marrow Transplatation Center

Year	Major Events
1969.3.25	Performance of the 1st living kidney transplantation in Korea
1980.5.3	Establishment of Gangnam St. Mary's Hospital
1983	Success of the 1st allogeneic hematopoietic stem cell transplant in Korea (Acute Lymphocytic Leukemia in adults)
1985	Success of the 1st autologous hematopoietic stem cell transplant in Korea (malignant lymphoma) Joining of the International Bone Marrow Transplant Registry (IBMTR) for the first time in Korea
1992	Inauguration of a Catholic BMT Center
1993.6.22	Performance of the 1st liver transplant at Gangnam St. Mary's Hospital
1995	Success of the 1st HLA mismatched allogeneic hematopoietic stem cell transplant in Korea Success of the 1st unrelated (allogeneic) BMT in Korea
1995. 9.15	Performance of the 1st heart transplant at Gangnam St. Mary's Hospital
1996.9.22	Performance of the 1st simultaneous pancreas-kidney transplant at Gangnam St. Mary's Hospital
1998.4.1	Establishment of Organ Transplant Center at Gangnam St. Mary's Hospital
1999	Performance of the 1000th hematopoietic stem cell transplant
2001.3.28	Performance of the 1st simultaneous kidney-liver transplant
2002.4.9	Performance of the 1st liver transplant after BMT
2004.4.9	Performance of the 1st living donor small intestine transplant
2008.12.31	Performance of the 1st small bowel transplant from a brain-dead donor

2009.3.2	Hospital name change to Seoul St. Mary's Hospital and establishment of Organ Transplant Center of Seoul St. Mary's Hospital
2009.5.4	Success of ABO-incompatible kidney transplant
2009	Winning of the 3rd Mystery of Life Award (Life science category)-Check the BMT Center
2010.5.14	Acute Myeloid Leukemia-Successful simultaneous liver transplant
2010.10.8	Success of ABO-incompatible liver transplant
2010.10.30	Awarded as an outstanding institution for management of brain-dead donors
2012.11.30	Performance of kidney transplant with immunologic tolerance induced by hematopoietic stem cells
2013.1.8	Performance of the 1st simultaneous heart-kidney transplant at Seoul St. Mary's Hospital
2013	Achievement of the 5,000th hematopoietic stem cell transplant
2014.7.9	Winning of the 2014 Korea Health & Medical Award (Organ Transplant Center of Seoul St. Mary's Hospital)
2014.11.27	Success of the 1st modified multiple organ small bowel transplant in Korea
2014.12.5	Awarded for being selected as an outstanding institution for management of brain-dead donors
2014.12.31	Achievement of the 5,693th hematopoietic stem cell transplant

Outcomes of Liver Transplantation

As of the end of July, 2015, a total of 900 liver transplants have been performed, and liver transplant was performed immediately after bone marrow transplant for the first time in Korea. The center opened a new horizon by successfully performing ABO-incompatible liver transplant, and has firmly established itself as a transplant center that gives hope to patients who cannot receive liver transplant due to lack of donors, by also performing transplants with livers of brain-dead donors. The center exerts its best to control infection by exercising multi-disciplinary approach between medical professionals and operating a transplant-only ward and an ICU independently.

Outcomes of Blood and Marrow Transplantation

1. Success of the first related (1983), unrelated (1995) and haploidentical mismatched (2002) hematopoietic (allogeneic) stem cell transplant in Korea
2. Success of hematopoietic stem cell transplant together with liver transplant and kidney transplant
3. Achievement of performing 5,000 hematopoietic stem cell transplants for the first time in Asia (2013)
4. BMT technology transfer to Mongolia, China, etc.
5. Increase in the number of inbound international patients coming from overseas such as Abu Dhabi in the Middle East to receive cancer treatment and bone marrow transplant.

Tangible achievement of study

- Clinical analysis of recurrent hepatocellular carcinoma after living donor liver transplantation
- The effectiveness of perioperative immunologic markers monitoring to predict early acute cellular rejection after living donor liver transplantation
- De novo hepatitis B virus infection after adult liver transplantation using hepatitis B core antibody positive graft

The liver transplant team at Seoul St. Mary's Hospital was the first in Korea to perform liver transplant immediately after bone marrow transplant, and the team published various research papers on the prediction of liver transplant rejection and HLA Type, and living organ donors and recipients. The team is playing a leading role in studies relating to liver transplant by publishing high-quality multi-divisional research papers in collaboration with not only the Hepatobiliary Division but also Gastroenterology Division, Infectious Diseases Division, Pathology Division, and Radiology Division.

- Han JH, Kim DG, Na GH, Kim EY, Lee SH, Hong TH, You YK. Effect of donor-recipient age matching in living donor liver transplantation. Transplant Proc. 2015 Apr;47(3):718-22.
- Na GH, Kim DG, Han JH, Kim EY, Lee SH, Hong TH, You YK. Inflammatory markers as selection criteria of hepatocellular carcinoma in living-donor liver transplantation. World J Gastroenterol. 2014 Jun 7;20(21):6594-601.
- Han JH, You YK, Na GH, Kim EY, Lee SH, Hong TH, Kim DG. Outcomes of living donor liver transplantation using elderly donors. Ann Surg Treat Res. 2014 Apr;86(4):184-91.
- Na GH, Kim DG, Han JH, Kim EY, Lee SH, Hong TH, You YK, Choi JY. Prevention and risk factors of hepatitis B recurrence after living donor liver transplantation. J Gastroenterol Hepatol. 2014 Jan;29(1):151-6.
- Na GH, Kim DG, Choi HJ, Han JH, Hong TH, You YK. Interventional treatment of a biliary s tricture after adult right-lobe living-donor liver transplantation with duct-to-duct anastomosis. HPB(Oxford). 2014 Apr; 16(4):312-9.

Ulsan University Hospital

- **Address** 877 Bangeojin Sunwhando-ro, Dong-gu, Ulsan, Korea
- **Homepage** http:// www.uuh.ulsan.kr
- **Tel** 82-52-7222

Ever since Ulsan University Hospital (UUH) opened as the first general hospital of Ulsan in 1975, it has grown into a hospital that represents Yeongnam area, and a hospital that has medical technology and capability that stand in comparison with the hospitals in the metropolitan areas.
Ulsan University Hospital receives much publicity from the press as a hospital with excellent performance in high-risk surgery, and the status of our hospital is elevating, accordingly. In additional our capacity is highly appreciated in that we are designated as a center specialized in severe disease and as Ulsan Regional Cancer Center. As a result, Ulsan University Hospital has become the only Tertiary Hospital in Ulsan.Ulsan University Hospital is affiliated with Ulsan University College of Medicine and has high-level of achievement in severe cancer treatment and organ transplantation by optimal clinical activities, research and training program and with state of the latest medical equipments.

- Tertiary Care Teaching Hospital(Established in 1975)
- 341 doctors
- 876 Nurses and 650 Staffs
- 32 Departments and 21 Centers
- 881 Beds
- Organ Transplantation Center(Designated in 2002)
- International Healthcare Center

Services of International Healthcare Center

	English	Chinese	Russian	Mongolian	Japanese	Arabic	French
Communication	○				○		
Medical Form	○						
Information (leaflet)	○						
Signage	○						
Facilities for foreign patients	Prayer Room						
Meal for foreign patients	Russian, Arabic, Mongolian						

For inquiries : 82-52-7222 (intlnr@uuh.ulsan.kr)

Ulsan Universiyty Hospital has the International Clinic Center since 1998, attending approximately 5,000 foreign outpatients annually, admitting 120 inpatients annually these days.
As Ulsan has developed as a major industrial city of Korea for 50 years, many foreign patients has been using medical service in UUH because of numerous foreigners' business visit in Ulsan.
UUH has long experiences of medical service for foreign patients with various races, nationalities, ages, and diseases. Recently, UUH has increased treatment of serious illnesses for foreign patients because many acute serious diseases and cancer diseases are found by medical health examination.
The International Clinic Center in UUH are ready to provide international medical service into treatment of serious illness for international patients based on high-level of surgery and organ transplantation with long experience of foreigner's medical service in UUH.

Outcomes of Liver Transplantation

This hospital performed the first living donor liver transplantation in the Ulsan region in 2002, and has been performing more than 10 liver transplants a year since 2010, with 28 performed in 2014 alone. It is the only other liver transplantation center in the Ulsan region, and the number of liver transplants performed in this hospital is growing. It also can boast an outstanding transplant success rate. 3 professors in the liver transplantation field are in charge of surgery and treatment.

History of Organ Transplantation Center

Year	Major Events
1998	Opened organ transplantation center
1998	Performed its first living donor kidney transplantation
2001	Designated as a specialized brain deceased donor management institution
2002	Performed its first living donor liver transplantation
2007	Performed its first liver-kidney simultaneous transplantation
2011	Performed its first blood mismatch kidney transplantation
2013	Performed its first kidney-pancreas simultaneous transplantation

Outcomes of Kidney Transplantation

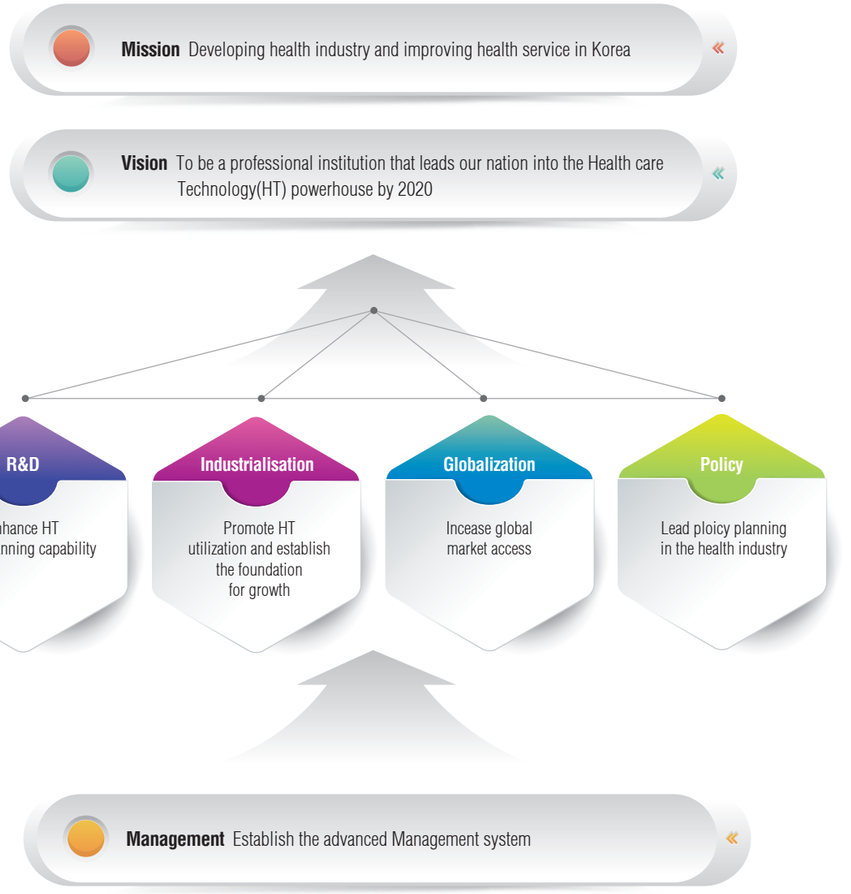
Starting with the first living donor liver transplantation in the Ulsan region in 1988, it achieved success in its first liver-kidney simultaneous transplantation in 2007 and simultaneous liver-pancreas transplantation in 2013. Compared to other hospitals in Korea, it has a higher proportion of brain deceased transplantation. In addition, despite of higher number of very challenging transplantation such as transplantation from a brain deceased who has been a beneficiary of transplantation, the 5 year and 10 year long term survival rates of patients from this hospital are 96.3% and 91.9%, respectively, which is quite excellent.

Outcomes of Bone Marrow Transplantation

Since its first hematopoietic stem cell transplant in September 2003, Ulsan University Hospital has performed more than 300 hematopoietic stem cell transplants, and carried out a total of 51 hematopoietic stem cell transplants (bone marrow transplantation) last year alone, ranking it 1st in the Yeongnam region and 9th nationwide in terms of the number of transplants. The number of hematopoietic stem cell transplants performed in this hospital is also growing each year. The early mortality rate after transplantation for this hospital is only 4.65%, which is significantly lower than the national average of 12.04%, and it was also classified into Class 1 in the treatment volume adequacy evaluation for the sector of hematopoietic stem cell transplants performed in 2014, as announced by Health Insurance Review & Assessment Service. Ulsan University Hospital performs an integrated multidisciplinary treatment for scheduled transplantation patients with blood cancer, in which a number of physicians from a number of divisions hold an in-depth multilateral discussion to determine the treatment direction. In addition, the hospital provides comprehensive treatment and consultation not only for the treatment of disease but also for the management of postoperative complications, infection prevention, nutrition management and rehabilitation through the operation of its hematopoietic stem cell transplantation clinic. In addition, it is the only hospital in Korea that has a professional medical staff system wholly responsible for hematopoietic stem cell transplantation, who works to increase the transplantation success rate by ensuring systematic and professional treatment. Patients who recover completely after hematopoietic stem cell transplantation can receive comprehensive medical checkups and health care in relation to the long term aftereffects, as well as any physical and mental problems, at the hospital's Lifetime Cancer Management Clinic, to ensure their good health stays with them for the rest of their lives.

KHIDI

Above Medical Korea, there is KHIDI



The Korea Health Industry Development Institute was established pursuant to the Korea Health Industry Development Institute Act. It is a government- funded agency, which aims to contribute to the improvement of the national health care system.
Korea Health Industry Development Institute is a public company that was established to nurture and develop public health industry and to improve public health service.
Since its establishment in 1999, KHIDI has contributed to strengthen the public health industry, by providing timely support in medical service, pharmaceuticals, medical equipment, beauty products, and products for seniors, coupled with increased R&D investment in public health technology. Also, we are focused on expanding the market and attracting foreign patients to have medical services in Korea, not to mention exporting our own medical system to overseas markets.

KHIDI Overseas Headquarters

Korea Health Industry Development Institute (KHIDI) has established six Global Business Offices in order to facilitate the overseas expansion of Korea Health Industry and to acquire their overseas authorization. Three new KHIDI global business offices have instituted in England, UAE, and Kazakhstan in 2012.
The KHIDI Global Business Offices have made continuous efforts to promote export marketing of Korea health industry by consulting on overseas licensing and supporting export contracts. Additionally, KHIDI supports projects that strive to enhance Korean healthcare services toward foreign patients as well as the overseas expansion of healthcare service institutions.

History and Major Activities of Medical Korea

2007

03 Established the Council for Korea Medicine Overseas Promotion(CKMP) as Public-Private Joint Conference Group
05 Hosted CKMP promotion program in L. A.
09 Hosted the 1st FAM Tour(5 countries)
11 Hosted the 2nd FAM Tour(3 counries)
11 Signed MOU with Thailand Center of Excellence for Life Sciences(TCELS)

2008

03 Participated in Medical Tourism Asia 2008 Exclusive Conference as a Bag Sponsor
05 Signed MOU with MTA (Medical Tourism Association), USA
05 Hold 2008 Korea Medical Tourism Conference
08 Signed MOU with the Ministry of Health of Peru
09 Signed MOU with China Entrepreneur Health Project(CEHP)
09 Supported World Medical Tourism and Global Health Congress 2008 (San Francisco)
10 Signed MOU with Government of Ontario, Canada
10 Signed MOU with Montgomery County, USA
10 Opening of the Overseas Headquarters (KHIDI -USA,KHIDI - Singapore, KHIDI -China)
11 Signed MOU with JETRO, Japan 11 Established APEC Harmonization Center in Korea
11 Hosted 2008 Korea International Medical Travel Convention (KIMTC)

2009

03 Hosted the Korean Medical FAM Tour
04 Hosted 2009 Global Healthcare Conference
05 Revised Medical Services Actand started the Registration forattracting foreign patients
05 Opened Medical Korea Information Center
06 Hosted the Korean Medical FAM Tour
07 Hosted the Promotion for the Korean Medicine in the USA
07 Signed MOU with the Chinese Medical Doctor Association(CMDA) for the cooperation in healthcare
07 Signed LOI with United Health International
10 Supported World Medical Tourism and Global Health Congress 2009 (Los Angeles)
10 Hosted 2009 Korea International Medical Travel Convention (KIMTC)
10 Broadcasting promotion documentary film at KBS World channel for Korean (70 countries)
12 Hosted ‘Smart Care, Medical Korea’ Brand declaration event
12 Signed LOI with the President’s Affairs Medical Center of the R Kazakhstan. (PMCRK)
12 Reached 162,638 foreign patients in 2009

2010

04 Singed MOU with the President’s Affairs Medical Center of the R Kazakhstan.(PMCRK)
04 Hosted Global healthcare & Medical Tourism Conference2010
04~07 Hosted the 1st Medical Korea Academy program
04~12 Hosted the Korean Medical FAM Tours (total 11 countries,116 persons)
09 Hosted Korea-Kazakhstan Korean Medical promotion & Seminar
09 Supported World Medical Tourism and Global Health Congress 2010 (Los Angeles)
09~12 Hosted the 2nd Medical Korea Academy program
10 Supported World Medical Tourism & Global Healthcare Congress
10 Hosted 2010 Korea International Medical Travel Convention (KIMTC)
11 Signed MOU with Huston. USA 12 Hosted Korea-China Medical exchange Seminar in Beijing
12 Reached 224,260 foreign patients in 2010

2011

02 Signed MOU with the Department of health of Primorsky Territory
03 Signed MOU with the Ministry of UAE, the HAAD and the DHA
04 Hosted 2011 Medical Korea Conference
04~09 Hosted the Korean Medical FAM Tours (total 10 Countries, 76persons)
06 Signed MOU with CIGNA International Corporation (Giobal Insurance company)
08 Supported the Seoul convention hosted by Korea American Medical Association(KAMA)
10 Supported the 4th World Medical Tourism & Global Healthcare Congress 2011(Chicago)
10 Hosted Health Seminar for US Asian (US Headquarter)
10 Hosted Medical CharityProgram
11 Hosted 2011 Korea International Medical Travel Convention (KIMTC)
11 Signed Agreement with the HAAD (Health Authority - Abu Dhabi)
11 Hosted Korea-China Medical exchange Seminar in Seoul
12 Reached 344,407 foreign patients in 2011

2012

01 Signed MOU with CIGNA INTERNATIONAL
04 Hosted 2012 Medical Korea Conference
04 Signed MOU with Wellness Center of Massimov
05 Hosted Medical Korea in UAE (Opening ceremony of Pre-Post Care Center)
05 Hosted ‘2012 Medical Korea in Central Asia’ in Kazakhstan and Uzbekistan
05 Signed MOU with Medical center of Presidents Affairs Republic of Kazakhstan
05 Signed MOU with UZBEKISTAN MEDICAL ASSOCIATION
05 Signed MOU with DAMAN(UAE National Insurance Company) for the Direct billing contract between UHI and Korean Hospitals
05 Contracted Hospital Service between Health Authority – Abu Dhabi and Korean hospitals
06 Signed MOU with Educational Clinical center of Kazakhstan
09 Signed MOU with Index Holdings(UAE)
10 Hosted the Promotion for the Korean Medicine in the Indonesia
11 Hosted the Medical Korea–Kazakhstan Project 2012
11 Hosted the Promotion for the Korean Medicine in the USA
11 Signed MOA with UAE Armed Forces (Healthcare cooperation)
12 Hosted the 4th Korea-China Medical exchange Seminar in Beijing
12 Reached 474,939 foreign patients in 2012

2013

- 01 Signed MOU with United Healthcare International for the Direct billing contract between UHI and Korean Hospitals
- 02 Signed MOU with World Vision for the Korean Medical Charity Program
- 03 Hosted Medical Korea and Cultural Event in Qatar and UAE
- 04 Hosted 2013 Medical Korea Conference
- 04 Signed MOU with UAE Armed Forces for the Healthcare cooperation
- 04 Signed MOU with Saudi Ministry of Health
- 07 Signed MOU with Aetna for the Direct billing contract between UHI and Korean Hospitals
- 09 Singed Implementation Plan on Medical Training Program with Saudi Ministry of Health
- 09 Hosted '2013 Medical Korea in Kyrgyzstan' in Kyrgyzstan
- 09 Signed MOU with CIGNA Corporation
- 10 Signed MOU with Republic of Buryatia, Russia
- 11 Hosted 'Korea-Kazakhstan Healthcare Investment Forum' in Kazakhstan
- 11 Signed MOU with Health Centre of the President of the Kyrgyz Republic
- 11 Signed MOU with Republican Center for Health Development of Kazakhstan
- 11 Hosted 'Korea Week 2013 in UAE' in UAE
- 12 Hosted the 5th Korea-China Medical exchange Seminar in Qingdao
- 12 D eveloped the Foreigner's Medical Exam Safety Insurance
- 12 Reached 650,411 foreign patients in 2013

2014

- 02 Singed MOU with Sharjah Health Authority(UAE)
- 03 Singed MOU with AstraZeneca (Oncology Research Program)
- 04 Hosted 'Korea-China Healthcare cooperation Forum' in Shaanxi Province
- 05 Hosted 2014 Bio & Medical Korea Conference
- 05 Singed Implementation Plan on Dentist Training Program with Saudi Ministry of Health
- 05 Signed MOU with VPS Healthcare Group(UAE)
- 07 Hosted 'Korea-China Healthcare cooperation Forum' (East-North Three in North-East China Province)
- 07 Singed MOU with Heilongjiang province(National Health and Family Planning Commission) of China
- 09 Singed MOU with UK Medical Research Council
- 09 Singed Agreed Minutes with Health Authority - Abu Dhabi
- 09 Singed MOU with Sichuan province(National Health and Family Planning Commission) of China
- 12 Signed MOU with China National Travel Service(HK) Group Corporation
- 12 Reached 816,691 foreign patients in 2014

2015

- 04 Hosted 2015 Bio & Medical Korea Conference
- 05 Signed MOU with UAE ADNOC for the Healthcare cooperation
- 07 Signed MOU with SAST, SITI of China
- 09 Signed MOU with Health and Family Planning Commission of Zhejiang Province (China)
- 12 (Estimated) Reached 1,000,000 foreign patients in 2015

Invitation

Dear colleagues,

We are delighted to inform you that the 22nd Annual International Congress of the International Liver Transplantation Society (ILTS 2016) will be held this year in Seoul, Korea on May 4-7, 2016. On this occasion, we are planning to organize a Live Demonstration Session on May 3, 2016 before the start of the ILTS 2016 Congress during which live demonstrations of living donor liver transplant surgery will be broadcast in real time from two major hospitals to the congress venue.

In this regard, it is a great pleasure for us to invite you to participate in the ILTS 2016 Live Demonstration to be held on May 3, 2016. We have no doubt that the ILTS 2016 Live Demonstration will provide an opportunity to share the most up-to-date surgical accomplishments and new techniques in the field of Living Donor Liver Transplantation.

Seoul is a dynamic city full of charm, and will be in its most beautiful spring season during the ILTS 2016 Live Demonstration. In addition to its deep historical and cultural heritage, the capital provides all the possible conveniences and world-class facilities of an international megalopolis that it is today.

We are confident that the ILTS 2016 Live Demonstration will offer much to see, learn, and take away as long-lasting memories, and invite you to participate in this wonderful experience.

We look forward to welcoming you at the ILTS 2016 Live Demonstration in Seoul, Korea.

Sincerely yours,

SUNGGYU LEE

Sung-Gyu Lee, MD, PhD
Chair, Local Program Committee
ILTS 22nd Annual International Congress

ILTS

대한이식학회
The Korean Society for Transplantation

Program at a Glance

ILTS 2016 Live Demonstration Program at a Glance

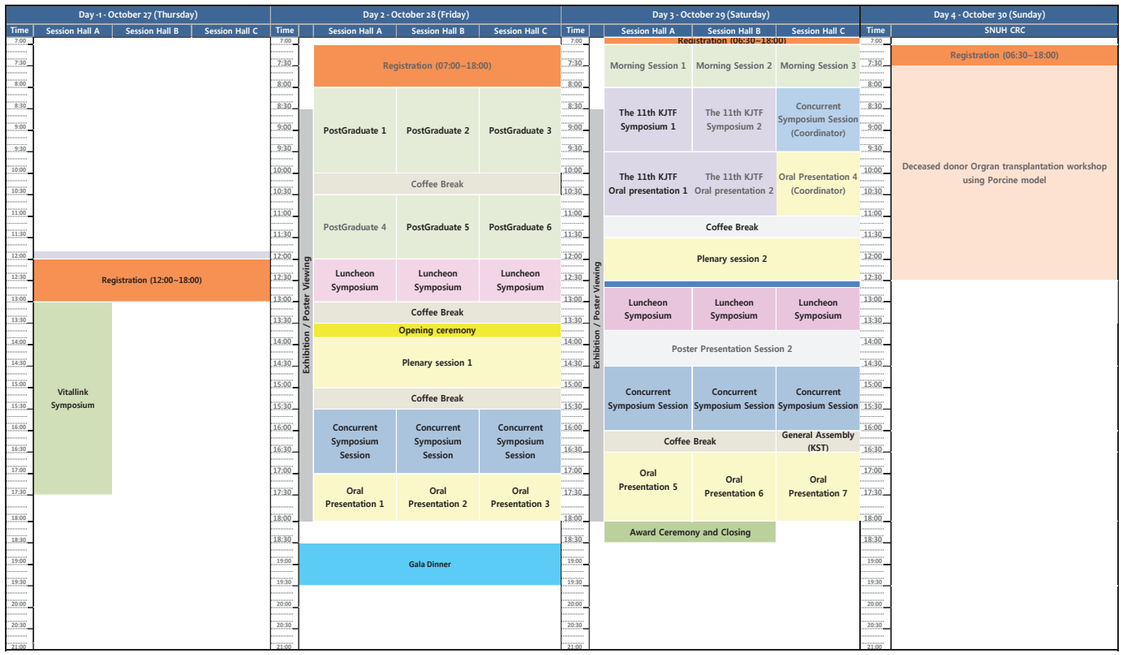
Time	Asan Medical Center	Seoul National University Hospital	Reg. & Exh.	Time
	Grand Ballroom 1	Grand Ballroom 3		
07:30				07:30
08:00	Registration	Registration		08:00
08:30		Opening (08:30 ~ 08:40)		08:30
09:00	Opening & Session 1 Introductin of Surgical Techniques of Dual Graft LDLT (09:00 ~ 09:35)	Session I-1 Case Presentation (08:40 ~ 09:00) Session I. Lessons Learned from Veterans in Adult-to-Adult Living Donor Liver Transplantation		09:00
09:30	Session 2. Case Presentation (09:35 ~ 09:50)	Session I-2 Donor Surgery (09:00 ~ 10:10)		09:30
10:00	Session 3 How to Overcome Small-For-Size Graft: The Neverending Challenge? (09:50 ~ 10:50)			10:00
10:30		Session I-3 Recipient Surgery (10:10 ~ 11:00)		10:30
11:00	Interactive Discussion for Live Demonstration 1 (10:50 ~11:20)			11:00
11:30	Coffee Break (11:20 ~11:40)	Session I-4 Bench Surgery (11:00 ~ 11:50)		11:30
12:00	Session 4 Why We Need To Perform Dual Graft LDLT (11:40 ~ 12:40)	Session I-5 Never Miss; Safe Landing (11:50 ~ 12:40)		12:00
12:30				12:30
13:00	Lunch (12:40 ~ 13:40)	Lunch (12:40 ~ 13:40) Session I-6 How to Reduce Learning Curve Period for Hepatic Artery Anastomosis (13:00 ~ 13:30)		13:00
13:30				13:30
14:00	Session 5 Minimal Invasive Donor Hepatectomy (13:40 ~ 14:40)	Session I-7 Save the Achilles; Final Spurt (13:40 ~ 14:30)		14:00
14:30				14:30
15:00	Interactive Discussion for Live Demonstration 2 (14:40 ~15:10)	Session II. Pediatric Liver Transplantation Pediatric Living Donor Liver Transplantation (14:30 ~ 15:20)		15:00
15:30	Coffee Break (15:10 ~15:30)	Coffee Break (15:20 ~15:35)		15:30
16:00	Session 6 Dual Graft LDLT: Surgical Extreme? (15:30 ~ 16:10)	Session III. Pure Laparoscopic Donor Hepatectomy (15:35 ~ 16:35)		16:00
16:30	Summary and Closing Remarks	Summary and Closing Remarks		16:30
17:00				17:00

Registration & Exhibition (08:00 ~ 17:00)

Asian Transplantation Week 2016

October 27 (Thurs) – 30 (Sun), 2016
Venue: Hotel Hyatt Regency Incheon, Incheon, Korea
Clinical Research Institute, Seoul National University Hospital, Seoul, Korea

Program at a Glance



Program Highlights

- **How to improve Deceased Organ Donation & Self-Sufficiency**
  - Joint Symposium with Vitallink Korea
- **Informative PG course**
  - How to set up transplant program (immunology lab, pathology, multidisciplinary team organization, and so on)
  - Pre- & post-transplant management protocol
  - Surgical techniques in Transplantation (Laparoscopic donor surgery, Liver transplantation, Kidney & Pancreas transplantation, etc)
- **Deceased donor organ recovery and transplantation workshop using porcine model**
- **How to improve Asian transplantation program**
  - Joint symposium with Japanese Transplantation Society (JKTF)
  - Joint symposium with Asian countries' transplantation society
- **Afford Travel award for the excellent abstracts**

Korea,

Global Leader in Organ Transplantation and Bone Marrow Transplantation