**MULTI-VISCERAL TRANSPLANT COMMONLY INTERPRETED TERMS**

**Active Candidate**

A transplant candidate eligible to be considered for organ offers at a given point in time. Some transplant candidates are temporarily classified as “inactive” by their transplant center because they are medically unsuitable for transplantation or need to complete other eligibility requirements.

**Acute Rejection**

The transplant recipient’s own immune system recognizes the new organ as foreign and mounts an immunological attack on it. Most acute rejections occur in the first year.

**Albumin**

Albumin is a protein manufactured by the liver. Albumin is used in the PELD calculations as a measure of the severity of liver disease.

**Allocation**

The process of determining how organs are distributed. Allocation includes policies and guidelines, which ensure that organs are distributed in an equitable, ethical and medically sound manner.

**Allograft**

An organ or tissue that is transplanted from one person to another of the same species: i.e. human-to-human. Example: a transplanted kidney.

**Anoxia**

Usually refers to lack of oxygen to the brain.

**Anti-Rejection Drugs (immunosuppressive drugs)**

Drugs that are used to prevent and/or treat rejection of a transplanted organ.

**Antibody**

A protein molecule produced by the immune system in response to a foreign body, such as virus or a transplanted organ. Since antibodies fight the transplanted organ and try to reject it, recipients are required to take anti-rejection (immunosuppressive) drugs.
Antigen

An antigen is any substance that causes your immune system to produce antibodies against it. An antigen may be a foreign substance from the environment such as chemicals, bacteria, viruses, pollen, or foreign tissues. An antigen may also be formed within the body, as with bacterial toxins.

Ascites

Build-up of fluid in the abdomen, usually associated with liver disease.

Autograft

A graft of skin or other tissue that is taken from the body of the person to be grafted rather than from another person.

Benign

Not cancerous (malignant.)

Biliary atresia

The bile duct that drains bile from the liver is too narrow or absent, causing bile to remain trapped in the liver.

Bilirubin

A breakdown product of hemoglobin from blood cells. Hemoglobin is what makes your stool brown, urine yellow, and the reason why liver disease patients are yellow, or jaundiced.

Biopsy

A tissue sample from the body, removed and examined under a microscope to diagnose for disease, determine organ rejection, or assess donated organs or tissues.

Blood Type

One of four groups (A, B, AB or O) into which blood is classified. Blood types are based on differences in molecules (proteins and carbohydrates) on the surface of red blood cells.

Blood Vessels

The veins, arteries and capillaries through which blood flows in the body. Certain blood vessels can be donated and transplanted.
**Brain Death**

Irreversible loss of brain activity. A brain dead person is dead, although his or her heart and lung remain functioning with the help of mechanical ventilator. Most organ donations come from brain dead donors.

**Candidate**

A person registered on the organ transplant waiting list. When an organ is offered on behalf of the candidate, he or she is then referred to as a Potential Transplant Recipient (PTR).

**Cardiac**

Having to do with, or referring to, the heart.

**Chronic**

Developing slowly and lasting for a long time, possibly the rest of a person's life. For example: chronic kidney failure.

**Chronic Rejection**

Slow, continuous immunological attack of the recipient’s transplanted organ usually resulting in progressive loss of organ function.

**Cirrhosis**

A disease of the liver in which normal, healthy tissue is replaced with nonfunctioning fibrous scar tissue and healthy, functioning liver cells are lost; usually occurs when there is a lack of adequate nutrition, an infection or damage caused by alcohol abuse.

**Corticosteroid**

A synthetic hormone used to reduce the body's normal immune reaction to infection and foreign tissue, such as a transplanted organ. Prednisone is a corticosteroid. These drugs are given immediately after a transplant and later to fight off bouts of rejection.

**Cyclosporine**

A drug used to prevent rejection of the transplanted organ by suppressing the body's defense system. Considered an immunosuppressant.

**Cytomegalovirus (CMV)**

A herpes virus that usually causes a mild infection. Important because it can become deadly in an immunocompromised transplant recipient. Deceased donors are screened for the presence of CMV antibodies.
**Deceased Donor**

An individual from whom at least one solid organ is recovered or the purpose of transplantation after suffering brain death.

**Deceased Donor Transplant**

The transplant of an organ from a deceased donor.

**Directed Donation**

The donation of an organ to a specifically identified recipient. These instructions are given by a donor or donor family member.

**Donor**

Someone from whom at least one organ or tissue is recovered for the purpose of transplantation. A deceased donor is a patient who has been declared brain dead. A living donor is one who donates an organ or segment of an organ for the intent of transplantation.

**Encephalopathy**

Serious brain function abnormalities experienced by some patients with advanced liver disease (and other diseases). Symptoms most commonly include confusion, disorientation, insomnia, and may progress to a coma. Ammonia buildup usually causes encephalopathy in liver diseased patients.

**End-Stage Liver Disease (ESLD)**

Irreversible liver failure that requires transplantation as hepatic replacement therapy.

**Epstein-Barr Virus (EBV)**

A common virus that remains dormant in most people, but may be a problem in transplant recipients. It has been associated with certain cancers, including Burkitt's lymphoma, immunoblastic lymphoma, and nasopharyngeal carcinoma.

**Truthfulness**

Patient should never be lied to about their condition and eligibility for treatment.

**Ethnicity** - For OPTN data purposes, the use of categories such as White; Black or African-American; Hispanic; Asian, American Indian/Alaskan Native; Pacific Islander; Multiracial.
Fulminant

An illness that occurs very quickly with an acute onset, as in fulminant liver failure. Usually occurs over days and not weeks.

Fulminant Hepatic Failure (FHF)

Acute liver failure with no pre-existing liver disease.

Fungal Disease

Infection that usually occurs in patients during treatment with steroids or immunosuppressants. Examples of fungi include *candidias, aspergillus* and *histoplasmosis*, which tend to affect the whole body and are not localized infections.

Graft

A transplanted organ or tissue.

Graft Survival

The length of time an organ functions successfully after being transplanted.

Health Insurance Portability and Accountability Act (HIPAA)

Passed in 1996, HIPAA requires employers to provide health insurance coverage to employees who lose or change jobs, and includes an administrative simplification section which deals with the standardization of healthcare-related information systems including data security, protection of patient confidentiality and privacy. The Act mandates standardized formats for all patient health, administrative, and financial data; unique identifiers (ID numbers) for each healthcare entity, including individuals, employers, health plans and health care providers; and security mechanisms to ensure confidentiality and data integrity for any information that identifies an individual.

Health Maintenance Organization (HMO)

An insurance plan encompassing a network of health care providers including doctors, hospitals, pharmacies, and other medical facilities and professionals where an individual and his/her employer pay a fixed monthly fee for services, regardless of the level of care.

Hematocrit (Hct)

The measure of the volume of red blood cells as percentage of the total blood volume. Normal in males is 43 to 49 percent, in females 37 to 43 percent.

Hemoglobin (Hgb)

The protein in red blood cells that carries oxygen.
**Hepatic**

Having to do with, or referring to, the liver.

**Hepatic Encephalopathy**

Associated with hepatic failure from any cause, attributed to the passage of toxic nitrogenous substances from the portal to the systemic circulation; cerebral manifestations may include coma.

**Hepatitis**

A viral infection or non-specific inflammation of the liver that can lead to liver failure. Hepatitis C is the leading cause of liver failure that leads to transplantation.

**Hepatitis B Virus (HBV)**

Formerly called serum hepatitis, it is caused by the hepatitis B virus (HBV). About 10 percent of cases progress to chronic hepatitis. It is spread through intravenous drug use, through sexual contact with infected individuals, through exposure to infected body fluids, and vertically from mother to child. Common symptoms include abdominal pain, fatigue, fever, jaundice, and elevated liver enzymes. A vaccine against HBV is available.

**Hepatitis C Virus (HCV)**

A form of hepatitis caused by the hepatitis C virus (HCV), previously known as non-A, non-B hepatitis. Most infections are due to injection drug use with contaminated needles. Blood transfusion-associated infections are rarer now than in the past due to improved blood donor screening. The CDC estimates 4.1 million (1.6 percent) Americans have been infected with HCV, of whom 3.2 million are chronically infected. Of the people who have chronic hepatitis C, 10 to 20 percent eventually develop cirrhosis and one to five percent develop hepatocellular carcinoma.

**Hepatologist**

A specialist who is an expert in the diagnosis and treatment of liver diseases.

**High Blood Pressure (hypertension) (HTN)**

When the force of the blood pushing against the walls of the blood vessels is higher than normal because the blood vessels have either become less elastic or have gotten smaller. High blood pressure causes the heart to pump harder to move blood through the body. High blood pressure can cause kidney failure and heart disease if not treated.
**Histocompatibility**

The examination of human leukocyte antigens (HLA) in a patient, often referred to as "tissue typing" or "genetic matching." Tissue typing is routinely performed for all donors and recipients in kidney and pancreas transplantation to help match the donor with the most suitable recipients to help decrease the likelihood of rejecting the transplanted organ. See Human Leukocyte Antigen System (HLA System).

**HLA Mismatch (MM)**

In transplantation, a mismatch indicates the donor has at least one HLA-A, HLA-B, or HLA-DR antigen that is not present in the recipient.

**Human Immunodeficiency Virus (HIV)**

The virus destroys cells in the immune system, which makes it difficult for the body to fight off infections; toxins, or poisons; and diseases. HIV causes AIDS, a late stage of the virus characterized by serious infections, malignancies and neurologic dysfunctions.

**Human Leukocyte Antigen (HLA)**

Molecules found on cells in the body that are inherited genetically. In donor-recipient matching, HLAs help to determine compatibility between a donor and recipients.

**Hypertension**

High blood pressure.

**Idiopathic**

Of unknown cause.

**Immune System**

The organs, tissues, cells and cell products in your body that work to find and neutralize foreign substances including bacteria, viruses and transplanted organs.

**Immunosuppression**

Prevention or inhibition of the immune system to respond to foreign substances in the body. Medications often used to prevent a recipient's immune system from rejecting a transplanted organ or tissue include prednisone, methylprednisolone, azathioprine, mycophenolate mofetil, cyclosporine, tacrolimus, and sirolimus, among others.
**Immunosuppressive**

Relating to the weakening or reducing of your immune system's responses to foreign material; immunosuppressive drugs reduce your immune system's ability to reject a transplanted organ.

**Leukocyte**

A white blood cell.

**Liver**

The largest organ in the body, made up of a spongy mass of wedge-shaped lobes. The liver secretes bile, which aids in digestion, helps process proteins, carbohydrates, and fats, and stores substances like vitamins. It also removes wastes from the blood. A living donor can give part of their liver, after which the liver will regenerate itself in both the donor and recipient.

**Liver and Intestinal Organ Transplantation Committee**

The standing OPTN committee charged with considering medical, scientific and ethical aspects related or liver/intestine organ procurement, allocation and sharing. The committee will consider broad implications and specific situations among members.

**Living Donation**

When a living person gives an organ or a portion of an organ for use in a transplant. A kidney, or portion of a liver, lung, pancreas or intestine may be donated. See also Living Donor, Organ Donation.

domino heart or liver transplants. See Domino Transplant.

**Living-Related Donor (LRD)**

A family member who donates a kidney, part of a lung, liver or pancreas to another family member. Examples: a brother and a sister, or a parent and a child.

**Living-Unrelated Donor**

A person who is not related by blood, who donates a kidney, part of a lung, liver or pancreas to another person (such as a husband, wife, friend or in-law. In the last few years, stranger-to-stranger living unrelated donations have greatly increased).

**Match**

The compatibility between the donor and the recipient. The more appropriate the match, the greater the chance of a successful transplant.
**Medicaid**

A partnership between the Federal government and the individual states to share the cost of providing medical coverage for recipients of welfare programs and allowing states to provide the same coverage to low-income workers not eligible for welfare. Programs vary greatly from state to state.

**Medicare**

The program of the Federal government that provides hospital and medical insurance, through social security taxes, to people age 65 and over, those who have permanent kidney failure and certain people with disabilities.

**Mismatch (MM)**

In transplantation, a mismatch indicates the donor has at least one HLA-A, HLA-B, or HLA-DR antigen that is not present in the recipient.

**Model for End-Stage Liver Disease (MELD)**

The scoring system used to measure illness severity in liver transplant candidates. This system is used in the allocation of livers to adults, established in February 2002. The MELD system uses three laboratory values (bilirubin, creatinine and INR) to calculate a score that is predictive of the risk of death within three months on the liver waiting list. Livers are allocated to waitlisted patients with chronic liver disease based upon this score. See Pediatric End Stage Liver Disease (PELD) Scoring System.

**Morbidity**

A disease state or the incidence or frequency of a disease among a population.

**Multiple Listing**

Being on the waiting list for the same organ at more than one transplant center.

**Non-Function**

A condition in which a transplanted organ fails to function after being transplanted into a recipient, meaning that the recipient will either have to start dialysis or undergo another transplant. Non-function is rare (less than two percent of all kidney transplants) but is more common in liver transplants.

**Non-Compliance**

Failure of patients to follow the instructions of the medical team. Usually non-compliance means refusing to take rejection medications as agreed upon before transplant.

**Organ**

A part of the body made up of tissues and cells that enable it to perform a particular function. Transplantable organs are the heart, liver, lungs, kidneys, pancreas and intestines.
Organ Donation

To give an organ or a part of an organ to be transplanted into another person. Organ donation can occur with a deceased donor, who can give kidneys, pancreas, liver, lungs, heart, intestinal organs, and with a live donor, who can give a kidney, or a portion of the liver, lung, or intestine.

Organ Procurement

The removal or retrieval of organs from a donor for transplantation.

Organ Procurement and Transplantation Network (OPTN)

In 1987, Congress passed the National Organ Transplant Act that mandated the establishment of the OPTN and Scientific Registry of Transplant Recipients. The purpose of the OPTN is to improve the effectiveness of the nation's organ procurement, donation and transplantation system by increasing the availability of and access to donor organs for patients with end-stage organ failure. The Act stipulated that the Network be a non-profit, private sector entity comprised of all U.S. transplant centers, organ procurement organizations and histocompatibility laboratories. These members along with professional and voluntary healthcare organizations and the representatives of the general public are governed by a Board of Directors which reports to the Division of Transplantation, HRSA and ultimately HHS. UNOS holds the OPTN contract.

Pancreas

Irregularly shaped gland that lies behind the stomach and secretes pancreatic enzymes into the small intestines to aid in the digestion of proteins, carbohydrates and fats. Islet cells within the pancreas secrete glucagon, which regulates blood sugar levels and insulin, which lowers blood sugar levels. If the pancreas fails, the individual becomes diabetic, and may need to take insulin. The pancreas can be donated and transplanted.

Past Medical History (PMH)

A record of a patient or donor's past medical problems.

Patient Survival

The length of time a patient survives after receiving a transplant.

Pediatric End Stage Liver Disease (PELD) Scoring System

A measure of illness severity used in the allocation of livers to pediatric candidates, established in February 2002. The PELD system uses three laboratory values (albumin, bilirubin and INR), a presence of growth failure (at least 2 standard deviations below average height or weight), and an indicator of whether the patient is less than one year of age to calculate a score predictive of the risk of death within three months on the liver waiting list for candidates under the age of 18. See Model for End-Stage Liver Disease (MELD).
Pediatric Transplantation Committee

The standing OPTN committee charged with considering medical, scientific and ethical issues relating to organ procurement, allocation and sharing for pediatric patients. These issues include: pre- and postoperative care, expeditious transplantation of children, and the specific medical, social and psychological needs of children. The committee considers the broad implications of such issues and will deal with these specific issues or situations as needed.

Perfusion

The passage of a fluid (blood or other) through the vessels of organs or tissues. Deceased donor organs are perfused to keep them viable for transplant.

Potential Donor

A patient who meets the criteria for brain death with no absolute contraindications to organ donation as defined by a standardized list from the International Classification of Diseases, Ninth Revision.

Potential Transplant Recipient (PTR)

A transplant candidate who has been ranked by the computer matching system as the person to whom an organ from a specific deceased organ donor is to be offered.

Preferred Provider Organization (PPO)

A health insurance plan with an established network of healthcare providers. It provides maximum benefit coverage when services are obtained from provider within the network. Reduced benefits generally apply for using health care providers outside of the network.

Recovery (Organ) aka “Harvesting.”

The surgical procedure of removing an organ from a donor.

Regions

For the administration of organ allocation and appropriate geographic representation within the OPTN policy structure, the membership is divided into 11 geographic regions. Members belong to the Region in which they are located. The Regions are as follows:

Region 1 - Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island

Region 2 - Delaware, District of Columbia, Maryland, New Jersey, Pennsylvania, Northern Virginia, West Virginia

Region 3 - Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, Puerto Rico
Region 4 - Oklahoma, Texas
Region 5 - Arizona, California, Nevada, New Mexico, Utah
Region 6 - Alaska, Hawaii, Idaho, Montana, Oregon, Washington
Region 7 - Illinois, Minnesota, North Dakota, South Dakota, Wisconsin
Region 8 - Colorado, Iowa, Kansas, Missouri, Nebraska, Wyoming
Region 9 - New York, Vermont
Region 10 - Indiana, Michigan, Ohio
Region 11 - Kentucky, North Carolina, South Carolina, Tennessee, Virginia

Rejection

A phenomenon that occurs when a recipient's immune system attacks a transplanted organ, tissue, or cell. Immunosuppressive drugs help prevent or treat rejection.

Renal

Having to do with, or referring to, the kidneys.

Retransplantation

Due to rejection or failure of a transplanted organ, some patients receive another transplant.

Split liver

A split liver transplant occurs when the donor liver is divided into segments and then transplanted. These segments may be transplanted into more than one recipient, or a segment could be transplanted into a child for whom an entire adult liver would be too large.

Steroids

Naturally occurring hormones in the body that help control important body functions. Synthetic or man-made steroids can be used to suppress the immune system.

Survival Rates

Survival rates indicate the percentage of patients that are alive and the grafts (organs) that are still functioning after a certain amount of time. Survival rates are used in developing OPTN policy.
**Systolic Blood Pressure**

The top number in the blood pressure (the 120 in a blood pressure of 120/80) measures the maximum pressure exerted on the vessel wall when the heart contracts.

**Time to Transplant (TT)**

The measure of time from wait-listing to transplantation. Time to transplant considers all candidates who are initially registered on the waiting list, and measures the time between waiting list registration and transplant date. See also Waiting Time (WT).

**Tissue**

An organization of a great many similar cells that perform a special function. Examples of tissues that can be transplanted are blood, bones, bone marrow, corneas, heart valves, ligaments, saphenous veins, and tendons.

**Tissue Type**

An individual’s combination of HLA antigens. Matching for tissue type is used in the allocation system for kidney and pancreas transplantation.

**Total Parenteral Nutrition (TPN)**

The delivery of nutrients, calories, protein, fat, and/or all caloric needs through a vein into the bloodstream. TPN is used for patients who cannot maintain their nutrition by oral intake.

**Transplant Center**

A hospital that performs transplants, including qualifying patients for transplant, registering patients on the national waiting list, performing transplant surgery and providing care before and after transplant.

**Transplant Coordinators Committee**

The standing OPTN committee charged with considering issues that affect the coordination of efforts related to organ procurement, organ allocation, the overall transplant process and the impact of technical innovations on allocation and operations, and how these affect patient/family care, donors and donor families.

**Transplant Program**

The organ-specific facility within a transplant center. A transplant center may have programs for the transplantation of hearts, lungs, liver, kidneys, pancreata, pancreas islets, and/or intestines.
**Transplant Team**

The diverse group of professionals at the transplant center who work to make a transplant successful. Each person on the "transplant team" is an expert in a different area of transplantation. The transplant team includes all or some of the following professionals:

Clinical transplant coordinators have responsibility for the patient's evaluation, treatment, and follow-up care.

Transplant physicians are doctors who manage the patient's medical care, tests, and medications. He or she does not perform surgery. The transplant physician works closely with the transplant coordinator to coordinate the patient's care until transplanted, and in some centers, provides follow-up care to the recipient.

Transplant surgeons perform the transplant surgery and may provide the follow-up care for the recipient. The transplant surgeon has special training to perform transplants.

Financial coordinators have detailed knowledge of financial matters and hospital billing. The financial coordinator works with other members of the transplant team, insurers, and administrative personnel to coordinate and clarify the financial aspects of the patient's care before, during, and after the transplant.

Social workers help patients and their families understand and cope with a variety of issues associated with a patient's illness and/or the various side-effects of the transplant itself. In some cases, the social worker may perform some of the financial coordinator duties as well.

**United Network for Organ Sharing (UNOS)**

The private, nonprofit membership organization that coordinates the nation's transplant system through HRSA's OPTN contract. As OPTN contractor, UNOS is responsible for meeting all contract requirements. As contractor since the first OPTN contract award in 1986, UNOS has established and continually strives to improve tools, systems and quality processes that support OPTN contract objectives and requirements. These include:

Managing the national organ transplant waiting list

Collecting, managing and reporting of sensitive clinical data in a secure, fail-safe environment

Facilitating an open, inclusive forum for development and continuous refinement of evidence-based policies and standards

Member and policy performance assessment to ensure equitable, safe treatment of candidates and recipients

Increasing donation and making the most of every organ that is donated through professional education, outcomes research, patient services and resources and public and professional education
Continuously improving the care, quality of life and outcomes of organ transplant candidates and recipients

**Varices (esophageal)**

Enlarged and swollen veins at the bottom of the esophagus, near the stomach. A common condition caused by increased venous pressure in the liver. These veins can ulcerate and bleed.

**Vascular**

Referring to blood vessels and circulation.

**Ventilator**

A machine that "breathes" for a patient when the patient is not able to breathe properly.

**Virus**

A group of tiny organisms capable of growing and copying themselves while living within cells of the body. Examples are HIV, Hepatitis B and C, EBV, and CMV. Any of the following could cause a patient’s organ transplant to fail or for them to potentially be disqualified from donating or receiving a transplanted organ.

**Wait List (WL)**

The list of candidates registered to receive organ transplants. When a donor organ becomes available, the matching system generates a new, more specific list of potential recipients based on the criteria defined in that organ's allocation policy (e.g., organ type, geographic local and regional area, genetic compatibility measures, details about the condition of the organ, the candidate's disease severity, time spent waiting, etc.).

**Wait List Registration**

To be registered for a transplant, a patient undergoes a complete clinical evaluation by the transplant team. If a transplant is needed, the center registers that patient on the Wait List. Within ten days of evaluating a patient for transplant, the transplant center is required to send a letter informing the patient that he or she has or has not been registered on the Wait List. The following registration status categories are used to track waiting patients:

- Active, describing actively waiting patients whose conditions are favorable for transplant surgery;
- Inactive, describing patients experiencing conditions (e.g., infection) that temporarily rule out transplant surgery;
- Removal, describing patients removed from the Wait List a) by personal, voluntary choice, b) because they have become too ill to survive surgery or posttransplant immunosuppression, c) are recovering adequate organ function, d) have received a transplant, or e) have died.
**Waiting Time**

The amount of time a candidate is on the Wait List. Waiting times can be influenced by many factors, including:

- blood type (some are rarer than others)
- tissue type
- height and weight of transplant candidate
- size of donated organ
- medical urgency
- time on the waiting list
- the distance between the donor’s hospital and the potential donor organ
- how many donors there are in the local area over a period of time and
- the transplant center's criteria for accepting organ offers

Depending on the kind of organ needed, some factors are more important than others.

**Xenograft**

An organ or tissue procured from a different species for transplantation into a human.

**Xenotransplantation**

Transplantation of an animal organ into a human. Although xenotransplantation is highly experimental, many scientists view it as an eventual solution to the shortage of human organs.