Where Will my New Liver Come From?

The Organ Shortage
There is a severe shortage of organs for transplant. This means that the wait for a liver transplant can take years. Patients may die while they wait. The UW Transplant Program has long been a leader in trying to find new ways to increase the number of good organs that can be used for transplant. When you are told you need a liver transplant, you have options about where your new liver will come from. It is vital that you explore these options fully.

Donation after Brain Death (Deceased Donor)
The most common type of organ donor is a person who has suffered a head injury that caused brain death. “Brain death” occurs when someone does not get enough oxygen to the brain and the brain stops working. This is often due to trauma or a stroke. Doctors can tell when someone is brain dead by doing certain tests.

Because the brain controls breathing, people in a hospital that are brain dead are on a breathing machine called a ventilator. The breathing tube and certain medicines help the person’s body to function even after brain death. This allows the heart to keep beating and supply the liver and other organs with blood and oxygen until a transplant team can arrive. Once the liver is removed, it should be transplanted within 12 hours into a recipient. Livers from these types of donors are called “standard donor livers.”

Donation after Circulatory Death (Deceased Donor)
There may be times that a patient’s trauma is so bad that doctors can’t save their life; but, they are not “brain dead.” If this happens, the doctor meets with the patient’s family to decide if life support should be stopped. If the family chooses to remove life support, the machines are turned off, and the patient can die peacefully. These patients may or may not be able to donate.

Transplant teams are on site when the life support is turned off. Once the patient’s heart stops beating and they are declared dead by the doctor, the transplant teams can remove the organs. This is called Donation after Cardiac Death (DCD).

Because the heart has stopped beating in these donors, there is a lack of blood flow for a short time to the organs as they are removed. This can lead to damage in the liver and cause problems for the patient who gets this liver. Most of the time these problems can be treated. A liver from a DCD donor has a higher rate of early failure compared to standard donor livers. If failure happens, you would need a second liver transplant.

You will be asked if you are willing to accept a DCD liver at your evaluation visit. If you are, you will sign a consent form for this. You can change your mind at any time. If you choose not to accept this type of organ, you will not lose your place on the list. If you accept a DCD liver,
your chance of getting a transplant sooner will increase.

Split Liver Transplant
In a split liver transplant, a liver from a deceased donor is split into two parts. Each part goes to a patient on the waiting list. This can be done because the liver can regrow itself after the transplant. It will grow to normal size within weeks. The patients that get the parts must meet size criteria to get a smaller piece of a liver vs. a whole liver. This is a more complex surgery and can result in increased problems. Most of the time these problems can be treated. A split liver transplant has a higher risk of failure compared to standard donor livers. If failure happens, you would need a second liver transplant. If you accept a split liver, your chance of getting a transplant sooner will increase.

“Increased Risk” Donors
You may be offered an organ from a deceased donor that is thought to be at increased risk for spreading certain infections.

Donors are deemed “increased risk” based on the 2013 Public Health Service (PHS) guidelines. Risk factors may include prostitution, intravenous drug use, or homosexuality. It is not the norm to accept organs from such donors unless we feel that the good far outweighs the would-be risk. Blood tests are done on potential donors to look for viruses such as HIV, Hepatitis B and/or Hepatitis C. No test is perfect, and false negative results can happen.

Based on the data from organ, tissue, and blood donors we know there is a small chance (1 in 60,000 to 1 in 2,000,000) that an infection could be passed on. We believe that the risks of getting this type of liver are very small. The transplant coordinator will tell you at the time that the liver is offered if it is from an increased risk donor. You can then decide if you want to accept this type of liver or not. If you choose not to accept the liver, you will not lose your place on the waiting list.

Hepatitis C Positive Donors
Hepatitis C is a virus that can damage the liver; however, we now have good medicines to treat this virus. We can sometimes use livers from donors who have or had hepatitis C. To make sure these livers are healthy to transplant, we do a biopsy of the donor liver. We feel these livers can safely be given to patients. Patients who get a liver from a donor with a hepatitis C will need to take medicine for a period of time after the transplant to treat the virus.

For a patient with hepatitis C, the outcomes after getting a liver from a donor with hepatitis C are no different than getting a liver without hepatitis C. One advantage for patients is that they may get an offer for a liver sooner. When you are placed on the waiting list your coordinator will discuss with you if you are eligible to get a hepatitis C donor liver. If you currently do NOT have Hepatitis C, you will have to sign a consent to be listed for a hepatitis C donor liver. If you choose not to accept the liver, you will not lose your place on the waiting list.

Hepatitis B Core+ Donors
Rarely (< 1% of all liver transplants done at UW) we get livers from donors who are found to have a possible past infection of Hepatitis B.
To make sure these livers are healthy to transplant, we do a biopsy of the donor liver. We feel these livers can safely be given to patients. Patients who get a liver from a donor with a past infection of hepatitis B will need to take an antiviral medicine for a period of time after the transplant to protect them from getting hepatitis B from the donor. The outcomes after getting a liver from a donor with hepatitis B are no different than getting a liver without hepatitis B. One advantage for patients is that they may get an offer for a liver sooner. If you choose not to accept the liver, you will not lose your place on the waiting list.

**What will I be told about my donor?**
Patient confidentiality laws limit how much we can tell you about your donor. We can’t tell you the donor’s age, gender, or personal or health history. The United Network for Organ Sharing (UNOS) is in charge of all organ allocation. The Organ Procurement Organization (OPO) informs the UW Transplant Program when a liver is found and who is number one on the UNOS list to get the liver.

The OPO does a thorough screening for all would-be donors to try and find any illness that could affect the transplant organ or the patient who gets it. This screening can be limited by time constraints between the time that the donor was injured, and when the organ is obtained. We use our best knowledge and judgment to attempt to ensure every organ we transplant will work and will in no way harm the patient who gets it.

**Living Donation**
Besides deceased donor transplants, patients may get a liver from a living donor. In a living donor transplant, a piece of a healthy person’s liver is transplanted into the recipient. This can be done because the liver regenerates itself in both the donor and recipient after the transplant. Both the donated segment and the remaining section of the donor liver will grow to normal size within weeks. Living donors can be related or un-related.

Benefits of living donation include being able to have a planned surgery and knowing the donor. However, because this is a more complex surgery, this type of transplant can result in increased problems. Most of the time these problems can be treated. Patient survival statistics after a living donor liver transplant are close to those who have had a deceased donor transplant.

**How do I choose?**
There are risks and benefits of each type of liver transplant. Members of the transplant team can provide more information about this topic. They can help you choose the type of transplant that may be best for your own case.