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FACTS ABOUT KIDNEY TRANSPLANTATION

Deceased Donor Kidney Selection and
“Expanded” Criteria Donor Kidneys



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DECEASED DONOR KIDNEY SELECTION AND “EXPANDED” CRITERIA DONOR KIDNEYS

The supply of deceased donors (called *cadaver donors* in the past) has not grown nearly as fast as has the number of those who are waiting for kidneys. At this time, transplant centers do not accept kidneys from some deceased donors if they have doubts about the quality of the kidney. It is known that the number of deceased organ donors will not increase nearly enough to transplant everyone. As a result, transplant doctors have wondered whether we can afford to throw away all kidneys that might be less than perfect. Many centers now accept these kidneys. Often they function well.

Transplant centers must now get permission from kidney patients to offer them kidneys from donors who have certain risk factors. Patients are told that the state of these kidneys may not be perfect. There is an increased risk of early and late loss of the transplant.

Donors with these risk factors are called *expanded criteria donors*. The risk factors are as follows:

1. Donor age over 60 (or 50 with other risk factors)
2. Donor history of high blood pressure
3. Stroke as the cause of death
4. Serum creatinine level over 1.5 mg/dL before the kidney is removed (This shows the level of kidney damage.)

About 7 out of 100 kidneys now used in transplants come from donors with 1 or more of these risk factors.

In the past, many of these kidneys would not have been thought to be high risk by some centers. Many have worked well for years. However, your transplant center must now get your written permission to consider one of these kidneys for you. Your center will always try to follow your wishes and make the best decision for you. But accepting a kidney from a donor with risk factors may be the only way for some people to gain freedom from dialysis. They could wait many more years for a “nonexpanded,” more perfect deceased donor kidney.

The exact risk of expanded donor kidneys is not known. But a good estimate is that these kidneys may have a 2 out of 10 loss rate at 1 year. This compares with 1 out of 10 for usual donors at 1 year. About 5 out of 10 expanded donor kidneys are still working at 5 years. This compares with 7 out of 10 usual donor kidneys at 5 years.

There is no right or wrong way to decide whether or not to accept an expanded donor kidney. Patients must look at what their life on dialysis is like. They have to look at the risks of selecting any deceased donor kidney. Plus, there is the added risk of having an expanded donor kidney. One can always wait for a better deceased donor kidney, knowing that there are still no guarantees as to how well any kidney will work. The wait may only be weeks, but it could be years. We all know many patients who have lived for years on dialysis. They are active and enjoy life. Still, there is a greater lifelong risk of death in staying on dialysis and not having a transplant. This is especially true in younger patients.

The next sections go into more on how to select a deceased donor kidney and how to decide about an expanded donor kidney.

HOW GOOD IS A DECEASED DONOR KIDNEY?

How “good” is a donated kidney? All kidneys from deceased donors are not the same. In fact, how well a kidney transplant works depends on both the donor and the recipient. Deceased donor kidneys come from organ procurement organizations (OPOs). They have full-time medical staff. The staff screens donors and receives the family's permission for the donation. Kidneys are then offered to transplant centers, based mostly on the tissue match and waiting times of their patients.

Most deceased donors—of any kind—have less than perfect kidneys. This is what can affect the quality of kidneys from deceased donors:

- The donor's age
- Cause of death
- Any event that happened when the kidney was removed, such as low blood pressure or clotting in the blood
- Not knowing the exact condition of each deceased donor kidney; this is mainly because short-term problems can make the kidney work poorly for a while. However, after a few months, some kidneys from deceased donors are found to work better after the transplant.
- How long the kidney has been kept out of a body after it has been removed from the deceased donor; this time is more of a risk when it is in the range of 18 or more hours. It happens more often when a kidney is sent from one region of the country to another because it is a good match.

In summary, there are many risks in choosing a deceased donor kidney for transplant in today's world. Some kidneys that seem to work well may not. Some that are not used for a transplant may have worked well.

It may be hard to be sure of the quality of many deceased donor kidneys. Yet these kidneys cannot simply be thrown away just because questions arise. Many working kidneys would be lost. Patients would spend years longer on the deceased donor kidney waiting list. Patients would spend more time on dialysis. Many patients still might not be offered a better kidney when their turn comes up again. But most often transplant centers can make good decisions as to whether to accept kidneys. As one might expect, transplant centers will disagree in some cases as to whether a given kidney should be used. Even now, some centers accept kidneys that other centers would not transplant. At this time, 9 out of 10 deceased donor kidneys will function for more than 1 year, and half of them—10 out of 20—will function more than 8 to 9 years.

Whether a kidney is from a deceased or a living donor, many of the same factors have an impact on how well and how long the kidney will work. These factors have to do with the donor, the time right after surgery, and what happens over time.

- *The donor.* It is easier to be sure about kidney function when there is a living donor. There is much more time to test the kidney and plan the surgery. Sometimes even living donor kidneys do not function well in the short or long term. But the risks are greater with deceased donor kidneys.
- *The postoperative period.* After any kidney is transplanted, it can be rejected. This can happen right after surgery. But the first month or 2 may be a more critical time for the health of the kidney. The kinds of transplant medications given to the patient during this time are very important. Research going on now is looking at this postoperative period.
- *Long term.* The degree of tissue match also has an influence on a long-term transplant. But this is true only when there is a perfect match. Of course, the transplant medicine that a transplant patient takes is crucial to how well the kidney will work. When the dose of these transplant drugs is too low, or when patients do not take all their medicines as prescribed, it will hurt long-term kidney function. This is as much or more of an issue than any problem with donor quality.

HOW IS THE DECEASED DONOR KIDNEY CHOSEN FOR ME?

First, a kidney is found to be acceptable by an OPO and a transplant center. Then it is offered to kidney patients. Patients are ranked on the basis of the following:

- Blood type
- Tissue match
- How long they have been on the waiting list
- How sensitized they are to other people's kidneys ("high PRA")

A computer program does the selection. Many individual facts about the deceased donor that might affect the kidney cannot be handled by the computer.

There are other factors that might decide how a kidney is chosen for a person:

- Doctors at the transplant center may bypass a kidney patient if he or she cannot be reached in time. A patient may be bypassed if there are medical problems that make the transplant too risky. In these cases, the kidney is offered to the next person who is on the list for that kidney.
- At times, a patient may decide to refuse a kidney. There is no penalty for this. At the same time, there is no guarantee what kind of kidney will be offered next or when it will be offered.
- Children are given extra points on the list.
- Persons who are waiting for several organ transplants are given extra points.

Please note that the computer does not look at age, sex, race, type of insurance, or any other feature of the patients on the waiting list. If all the local transplant centers agree, there may be regional differences in how kidneys are shared. Some regions may give more weight to certain donor or patient factors. This is done to distribute a deceased donor kidney in a way that is as fair as possible to all patients in that region.

CAN I BE HARMED BY MY KIDNEY TRANSPLANT?

Deceased donors and their kidneys are tested carefully. First, doctors look at the condition that has caused brain death. Some deceased donors have other medical conditions or diseases. Family members are asked about the life style of the donor. Deceased donors are tested for syphilis, hepatitis B and C, HIV, AIDS, and other viral infections. Some good donors may have infections caused by bacteria. This does not rule out taking the kidneys. But the transplant patients must be treated for these infections at the time of transplant. Even with all the testing, there is always a risk that a disease from the kidney may be given to the transplant patient. This risk is much less than 1 in 100.

Hepatitis C kidneys. A number of good kidney donors have been rejected because they have infection with hepatitis C virus. In both kidney donors and transplant patients, it is often a rather mild form of the disease. But it can lead to long-term liver failure while patients are on dialysis or after a transplant. Many centers now offer kidneys from donors with hepatitis C to patients who also have the virus. These patients may have some resistance to the virus because their bodies are already fighting it. They can get a slightly different type (or “strain”) of this virus from a transplanted kidney.

Transplant drugs can hide the signs of infection. Still the risks that these drugs will make the hepatitis C worse are about the same whether they get a kidney with or without the disease. In several hundred of these transplant patients, the risk of a serious problem from hepatitis C is perhaps 1 or 2 in 100 over the first few years. The waiting list for kidneys with hepatitis C is not very long. If you are a patient with hepatitis C, you might want to think about offering to have one of these kidneys. It is a new approach. It must be discussed well ahead of time with your doctor. In the short term, these kidneys have worked well. But the long-term risks are not well known.

Deceased donors are also screened for any form of cancer, because cancer can be spread to the transplant patient from the new kidney. If this happens, transplant drugs usually have to be stopped. The kidney is often lost. As with some infections that are carried by the transplanted kidney, getting cancer this way can be fatal. Certain forms of brain cancer in the donor do not seem to involve the donor kidney. Great care is now being taken in selecting kidneys from these donors with cancer. The chances of spreading cancer to the patient are maybe 1 in 1000.

SUMMARY

There is a lot to think about in selecting deceased donor kidneys. The process needs good judgment and a little bit of good luck. Still, the expected “life span” for these kidneys goes up each year, and a kidney transplant improves the life and the health of many kidney patients. The information in this brochure should not take the place of talking with transplant doctors about these issues. It is a very complex field that is changing all the time. For some, the choice of an expanded donor kidney or a hepatitis C kidney may be a good one. For all patients, knowing more about how and why deceased donors are selected should increase their comfort with a kidney transplant.