UW Medicine
UNIVERSITY OF WASHINGTON MEDICAL CENTER

Deceased Donors

For a kidney transplant

This chapter explains the different types of deceased kidney donors. Read this chapter before you are called for surgery so that you know what to expect.

The Kidney Donor Profile Index

During your team visit, the transplant team will talk with you about the different types of deceased donors. They will also explain the *Kidney Donor Profile Index* (KDPI).

The KDPI is used to rate a donor's kidney health. The KDPI score is based on the donor's age, height, weight, ethnicity, history of high blood pressure (*hypertension*), history of diabetes, whether stroke was the cause of death, serum creatinine levels, hepatitis C status, and Donor After Cardiac Death (DCD) status (see "Donor After Cardiac Death" on page 4).

A donor's KDPI score tells how long their kidney is likely to work after transplant. The score is given as a percent (%). It can be as low as 0% and as high as 100%. A lower KDPI score means that the kidney is expected to last longer. For example:

- A KDPI score of 20% means the kidney is likely to work longer than 80% of other deceased donor kidneys.
- A KDPI score of 60% means the kidney is likely to work longer than 40% of other deceased donor kidneys.
- Kidneys with KDPI above 85% are expected to work longer than 5½ years. These transplants tend to happen more quickly than transplants of kidneys with KDPI below 85%.

Learn about the different types of deceased donors so that you are ready to make decisions when you get the call for transplant.

Types of Donors

Standard Criteria Donors

When you are placed on the deceased donor kidney transplant wait list, you are added to the list of people who are waiting for a kidney from a *standard criteria donor* (SCD).

An SCD:

- Has a KDPI score below 85%
- Does not have known risks for hepatitis or HIV infection

At the time of this writing (December 2016), the wait time for an SCD kidney transplant is about 3 to 5 years.

Other Types of Donors

You can also choose to accept a kidney from a donor who does not meet the standard criteria. These donors may have:

- A KDPI score above 85%
- Known risks of infection (see "Higher-Than-Standard-Risk Donors" on page 5)

Most times, making this choice means you have a shorter wait for kidney transplant. If you are on dialysis, you are likely live longer after transplant if you receive your kidney earlier.

If you have type B blood, you may choose to accept a kidney from a donor who has type A or AB blood (see "A2 and A2B Donors" on page 6). We do these types of transplants because the wait list for type B transplant patients is much longer than the wait list for type A and AB patients.

Deciding on Donor Type

We may call you at any time of day or night for a deceased donor transplant. The kidney we offer you may be from:

- An SCD
- A donor with KDPI above 85%
- A higher-than-standard-risk donor
- A donor who has had cardiac death (see "Donation After Cardiac Death" on page 4)
- An A2 or A2B donor

You will need to know what these terms mean so that you can quickly make the best decision for you when we call.

You do not need to accept a kidney from any donor who does not meet the standard criteria. But, your wait for a kidney from an SCD might be months or years longer than your wait for a kidney from a donor who has a higher KDPI score or with known risks of infection.

Estimated Post-Transplant Survival (EPTS)

All people on the deceased donor kidney transplant wait list are given an *Estimated Post-Transplant Survival* (EPTS) score. This score is used to match kidneys that are likely to last longer with the people who will likely need working kidneys longer. The score is given as a percent (%).

Your EPTS score is based on factors that affect how long you will need a kidney to work after transplant:

- Your age
- How long you have been on dialysis
- How many transplants you have already had
- Whether you have a history of diabetes

If you have a higher EPTS score, you may choose to receive a kidney from a KDPI above 85% donor. This kidney may not last as long as one from a KDPI below 85% donor, but your wait time for transplant will likely be shorter.

Here are 2 examples of how the EPTS score works:

- Someone with an EPTS score of 20% is often a young person who will likely need a kidney transplant to last longer than 80% of other candidates.
- Someone with an EPTS score of 60% will likely need a kidney transplant to last longer than 40% of other candidates.

How to Find Your EPTS Score

We will tell you your EPTS score, but you can also figure it out yourself. To do this, visit the Organ Procurement and Transplantation Network website:

https://optn.transplant.hrsa.gov/resources/allocation-calculators/epts-calculator/

Kidney Life and Donor KDPI Scores

This chart shows how long we expect a kidney to last based on the donor's KDPI score:

Deceased Donor's KDPI Score	Kidney Expected to Last
Higher than 85%	5.60 years
Between 21 and 85%	8.90 years
Between 0 and 20%	11.44 years

Please note that these numbers are *medians*. This means that half (50%) of the kidneys will work longer than the number of years in the "Kidney Expected to Last" column and half (50%) will work a shorter time. Your health and how well you take your medicines will be the main factors that affect how long the transplant will work.

Kidneys from donors with a KDPI score above 85% often do not last as long as kidneys from donors with a KDPI score below 85%. We usually offer kidneys from donors with KDPI above 85% to people on the wait list who are:

- Over age 60 and do not have diabetes
- Over age 50 and have diabetes

Donation After Cardiac Death

One of the factors in the donor's KDPI score is their *donation after cardiac death* (DCD) status. You may be offered a kidney from a DCD donor, so it is important to understand what this means and how it may affect you.

- Most organ transplants come from donors who are pronounced *brain dead*. But, some organs come from donors who donate after cardiac death. This means that their heart stopped beating before they were pronounced dead.
- When the DCD donor's heart stopped beating, their kidney stopped receiving oxygen. Because of this, a DCD kidney may take longer to start working in your body. This is called *delayed graft function* (DGF). It is common to need dialysis after a DCD kidney transplant.
- Most DCD kidney transplants start working very well after they have some time to heal.

KDPI-above-85% donors may also be DCD donors.

Higher-Than-Standard-Risk Donors

Sometimes we find out that a deceased donor was involved in "high-risk behaviors." These behaviors are defined by Public Health Services (PHS). They include:

- Drug use
- Time in jail
- Prostitution

For a full list of high-risk behaviors, read "Behavioral Risk Factors for Recent HIV, HBV, or HCV Infection" at *optn.transplant.hrsa.gov/media/1163/2013_phs_guideline.pdf*.

If we offer you a kidney transplant from a deceased donor with known risks, we will tell you that it is from a "higher-than-standard-risk donor."

A kidney from this type of donor works just as long as a kidney from an SCD. Accepting a kidney from a higher-than-standard-risk donor may shorten your wait time for transplant.

Infection Risk After Transplant

We test every deceased donor for hepatitis B, hepatitis C, and *human immunodeficiency virus* (HIV). But, there is a very small chance that the test result will be a *false negative*. This means that even though the result looks negative, the donor did have the hepatitis or HIV virus.

The risk of an infection, and a false negative test result, is higher in donors who were involved in high-risk behaviors. **We will always get your consent before giving you a kidney from a higher-than-standard-risk donor.**

There is only a small risk that hepatitis or HIV will be passed to you through your kidney transplant. If you receive a kidney from a higher-than-standard-risk donor, your risk of getting an infection is:

- For hepatitis B virus: About 1 in 300 transplants (0.33%)
- For hepatitis C virus: About 1 in 5,000 transplants (0.02%)
- For HIV: About 1 in 16,000 transplants (0.006%)

In comparison, your risk of dying in a plane crash is 1 in 5,000 (0.02%).

The risk of getting hepatitis B is higher than the other infections. We will ask you to get a hepatitis B vaccine series before transplant. This will lower your risk of this infection.

If you decide to accept a kidney from a higher-than-standard-risk donor, you will meet with an infectious disease specialist before your surgery. This specialist will clearly explain the risks involved.

We will keep testing you for hepatitis and HIV for 1 year after your transplant. The risk of getting these infections through kidney transplant is never 0%, even if the organ is from an SCD.

A2 and A2B Donors

Some donors with type A blood have different proteins on their red blood cells. These proteins make their blood look like type O blood to your immune system. This means your body may accept their organ more easily.

This blood type is called "A2 subtype" or "non-A1 subtype." Some people with type AB blood have the "A2B subtype" or "non-A1B subtype."

Donors with A2 or A2B subtype blood can safely donate to some type B recipients. A2 donors can also safely donate to some type O recipients, but this match is only done with living donors, not deceased donors.

If You Have Type B Blood

If you have type B blood, your wait time for a deceased donor kidney is often longer than it is for other blood types. If you are able to receive a kidney from a type A2 or A2B donor, your wait time is likely to be much shorter.

We will do a blood test to see how strongly you react to type A blood. This test checks for *anti-A antibody titers*.

- If you have a strong reaction, we will **not** give you a kidney from a type A2 or A2B donor.
- If your reaction is not very strong, we can safely give you a kidney from a type A2 or A2B donor. If we offer you an A2 or A2B kidney, it means that your blood test showed that your anti-A antibodies are not too high.

A kidney from a type A2 or A2B donor can work just as well as a kidney from a type B donor. The outcome and long-term patient and graft survival rates are the same.

There are very small risks involved in transplanting an A2 or A2B kidney into a type B recipient. There may be a slightly higher risk of early rejection. Your doctor will monitor your kidney closely after your transplant. If needed, your doctor may do a kidney biopsy.

You may choose not to receive a kidney from a type A2 or A2B donor. This choice will not affect your place on the wait list for a type B kidney transplant.

Questions?

Your questions are important. Call your doctor or healthcare provider if you have questions or concerns.

Transplant Services: 206.598.3882

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