

Transplant Renal Biopsy

For a kidney/pancreas transplant

This chapter explains a transplant renal biopsy, an exam that shows what is going on inside your transplanted kidney.

Why do I need a kidney biopsy?

A biopsy is the best way to know what is going on inside your transplanted kidney. Your doctor may order a biopsy to:

- Find the cause of problems in how your kidney is working
- Check the status of your kidney before making any changes in your medicines

Biopsy results will show if you have rejection, infection, injury from medicines or other causes, or new kidney disease. These results may be used to change your medicines or your treatment plan.

How do I prepare?

Medicines

Before your biopsy, your doctor will review your medicines. If you are taking blood-thinning medicines, you will need to stop taking them a few days before the biopsy. Blood-thinning medicines include aspirin, Aggrastat, Agrylin, Angiomax, Argatroban, Arixtra, Coumadin (warfarin), Fragmin, Innohep, Integrillin, Iprivask, Lovenox, Orgaran, Persantine (dipyridamole), Plavix, Pletal, Refludan, Remodulin, ReoPro, Ticlid, Trental, and Ximelagatran.

Tell your doctor if you are allergic to iodine, lidocaine, or novacaine. These will be used during your biopsy.



Your doctor will review your medicines before your biopsy.

Eating

If you will **not** be taking a *sedative* (medicine to help you relax) for the biopsy, it is OK to eat before the procedure.

Most biopsies are done quickly and without sedation. The only medicine you will receive is an injection to numb the skin and tissues around your transplanted kidney.

If you need sedation to help you relax:

- Do **not** eat or drink after midnight the night before your biopsy.
- Sedation will increase the time you need to wait before you can go home.
- You will need to arrange for someone to drive or accompany you home after your procedure. You will not be allowed to drive yourself or travel alone in a bus or taxi.

Arriving at the Hospital

Blood and urine will be collected before your biopsy. When you arrive at the hospital, go to the lab on the 3rd floor for these lab tests unless you are told otherwise.

The Transplant Biopsy

After your tests, you will go to Radiology/Imaging Services. The *sonographer* (ultrasound technologist) will do an ultrasound of your transplant to check blood and urine flow. If no problems are found:

- Your abdomen will be cleaned with an antiseptic (Betadine or Chlorhexidine).
- Sterile paper drapes will be placed over the biopsy site.
- A numbing medicine (lidocaine or novacaine) will be injected into your skin and tissue near your transplanted kidney.
- When the area is numb, a very small cut will be made in your skin and the biopsy needle will be placed through this cut. Under ultrasound guidance, the needle is moved to your transplanted kidney.
- Once the needle is just outside your transplant, a biopsy is taken. You will hear a snapping sound when this is done.
- At least 2 passes with the needle may be needed to get enough tissue to make a diagnosis.

Sometimes the tissue around a kidney transplant gets very hard. You may feel pressure, but you should not feel any sharp pain.

After Your Biopsy

After your biopsy, nurses will monitor you for about 4 hours. You will be able to go home when you:

- Have no bleeding
- Have stable blood pressure
- Urinate at least once

At Home

- If your urine is red, drink plenty of fluids to help pass the blood.
- Call your doctor if you have:
 - Very red urine
 - Blood clots in your urine
 - Pain

Risks

All procedures involve risks. A transplant kidney biopsy has these risks:

- A *fistula* (an abnormal connection of an artery and a vein) inside the kidney may cause bleeding or higher blood pressure:
 - A fistula forms in 15% of patients (15 out of 100 patients)
 - Problems from a fistula occur for less than 1% of patients (fewer than 1 out of 100 patients)
- Blood in urine occurs for 10% of patients (10 out of 100 patients)
- Loss of blood that requires a blood transfusion occurs for 1% of patients (1 out of 100 patients)

Of patients who had a transplant kidney biopsy, less than 1% (fewer than 1 out of 100 patients) had:

- A blood clot that blocked urine flow
- The need for a *stent* (plastic tube) in the ureter to unblock the urine flow
- A blood clot that put pressure on the kidney, reducing kidney function and increasing blood pressure
- A hole in the kidney that caused bleeding and needed to be plugged

To treat a hole in the kidney, a *catheter* (a thin, flexible tube) is inserted into the groin and up to the kidney. A plug called a *coil* is then placed in the hole to stop the bleeding.

- Loss of kidney function
- Loss of the kidney
- Infection in the skin, muscles, or kidney
- Puncture of another organ in the abdomen
- Nerve injury between the skin and the kidney that causes pain or loss of feeling
- Nausea or vomiting
- Leaking of urine around the kidney
- Death

Ask your doctor if you have any questions or concerns about the risks of having a kidney biopsy.

Getting Your Biopsy Results

The first results of your biopsy will be ready:

- Within 48 hours if your biopsy is done early in the week
- Late on Monday if your biopsy is done on a Friday

Your nephrologist may call you with these first results.

Final results take at least 5 days because of special testing that is done on the tissue samples. Results may also take longer if more evaluation is needed.

Most times, you will meet with your nephrologist to talk about the final results. Your nephrologist will let you know if any changes in your treatment plan are needed.

Questions?

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

Transplant Services:
206.598.3882