

Supplemental Material

Kidney Precision Medicine Project Ethics Statement for the Kidney Precision Medicine Project
KPMP Frequently Asked Questions



Ethics Statement for the Kidney Precision Medicine Project

The Kidney Precision Medicine Project (KPMP) is committed to assuring the highest ethical standards are met in the conduct of research. An important part of achieving this goal is to pay careful attention to the balance of potential benefits versus harms of conducting KPMP protocol kidney biopsies for patients with some of the most common and vexing forms of kidney diseases. These include acute kidney injury (AKI) and chronic kidney disease (CKD) attributed to diabetes or hypertension, for which the need for better approaches to diagnosis and treatment is enormous. Since the inception of the KPMP, the Community Engagement Committee (CEC) in particular has focused on these issues, being actively involved in shaping the study design, from the clinical protocol to tissue interrogation by advanced 'omics and imaging. The CEC comprises patient partners, who reflect the populations with AKI and CKD recruited to the KPMP, as well as ethicists, clinicians, and scientists. The CEC members actively participate in virtually every other work group or committee for KPMP so that their input is broadly represented across study activities. Notably, the CEC led the way to obtaining no-fault insurance for medical expenses of KPMP participants should a complication occur as a result of study participation. This is a first in federally-funded clinical research to the best of KPMP's knowledge. In addition, the KPMP is overseen by other experts including program officers from the National Institute of Diabetes, Digestive, and Kidney Diseases of the National Institutes of Health, a Data Safety Monitoring Board (DSMB), and an External Expert Panel, who also provide substantial oversight for protection of study participants while striving for the highest level of rigor in scientific investigation.

The potential risks for KPMP participants include physical harms due to adverse events associated with complications from the kidney biopsy, financial risks associated with clinical care related to participation in the research, and risks to confidentiality of genetic information or other personal health information accrued in the course of study. Of these, the risk of injury or death as a complication of kidney biopsy is low, but sufficiently serious to warrant detailed description in the informed consent process. It is important for the participants who undergo a protocol-only kidney biopsy for the KPMP to be aware that, for the sake of societal benefit, they are assuming risks that they would not otherwise face in the course of their care. For those participants in whom kidney biopsy would ordinarily be conducted for clinical purposes, an incremental additional risk of injury is associated with the extra tissue collection required for research. The IRB-approved consent form clearly articulates these risks as well as the anticipated benefits, including the possibility of generating new information that may inform their clinical care or life choices, as well as gains in knowledge that may benefit other patients with kidney diseases. The goals of making substantial advances in diagnostics, therapeutics, and science for AKI and CKD will be facilitated by the information obtained from performing biopsies in the KPMP. If an acceptable alternative had existed without the biopsy-related risks, it would have been adopted.

The single Institutional Review Board (sIRB) from Washington University has worked side-by-side with the KPMP investigators and their institutions to assure that the study is conducted in compliance with federal regulations

and institutional policies for protection of participants in clinical research. The IRB determined that the criteria for protection of human subjects were met in the following ways:

- KPMP has a robust vetting and qualification process for physicians allowed to perform the kidney biopsies, plus a required procedural checklist of items to be verified before performing the biopsy, with stopping points to ensure biopsies are only performed on eligible participants. There is a strict procedure for kidney biopsy that was created by experts based upon current knowledge and practices. The number of cores has been minimized such that it is sufficient for both clinical assessment and research purposes. The protocol has strict inclusion criteria to ensure only appropriate participants are enrolled and follow-up procedures are in place to monitor for potential complications or adverse events.
- The KPMP protocol-only biopsy has minimized risks to the extent possible. The potential benefit is that the knowledge gained will materially advance the development of new diagnostics and treatments for AKI, diabetic CKD, and hypertensive CKD. The anticipated benefit has been maximized by planning research that will yield the information judged to be most needed for progress in kidney diseases and for developing plans for sharing with a broad range of scientists. Additionally, KPMP participants will be able to access information about the KPMP online.
- The population being targeted for recruitment are patients that are most impacted by AKI and CKD, who represent the populations that are most likely to benefit from the information learned.
- The study has a detailed plan for safety monitoring. Subjects will be followed for at least a month after the biopsies to ascertain adverse events. The DSMB meets regularly and has specific criteria for stopping rules.
- The KPMP protocol has suitable security in place to protect all study records, including encryption and audit trails. There are appropriate plans to protect subject privacy during study procedures, and the protocol has been carefully developed to collect only information and specimens needed for the study aims.
- Return of results will be performed using a staged approach. Clinical biopsy results will be communicated to the participant's clinician, who will then communicate the results to the participant. Laboratory studies obtained in a CLIA certified laboratory will be similarly communicated as requested by the participant. An analogous approach will be used for any other clinically actionable item found during the research visits.

Up-to-date information about the study is provided on the KPMP website (kpmp.org). Contact information for investigators at the recruitment sites, as well as the Central Hub, are readily available so that they can address questions or concerns about the KPMP from patients, caregivers, professionals, or the public.



KPMP Frequently Asked Questions

1. How is a research biopsy different from a clinical biopsy?

A clinical biopsy occurs when your nephrologist (or kidney doctor) would like to have a formal diagnosis of your kidney disease and/or to know the status of your kidney disease to help guide their clinical care of your kidney disease. The clinical biopsy will provide samples that are only used for determining your clinical care.

A research biopsy is done for study purposes only, though we will provide the clinical results to your healthcare team so they can choose to use them to guide your clinical care if they feel it is appropriate. The research biopsy will provide samples that will: 1) be used to produce a report that may be used to guide your clinical care, like a clinical biopsy; and also 2) be used specifically for research purposes that are known today, and new methods that have not yet been discovered.

2. What will be needed from me for this study?

We will ask you for permission to biopsy your kidney. We will ask you for blood and urine samples at least 1-2 times a year. We will ask for permission to study your health records and will ask you to complete questionnaires.

3. Will my information be kept anonymous?

Your privacy is very important to us. We will take great care to protect it. Your KPMP record will not have your name. We will replace your name with a code. We will limit who has the key that links codes to names.

We will keep your KPMP record with the records from all of the people who join KPMP. We will store all of these records securely

4. What will happen during the kidney biopsy procedure?

First, the care team will place an IV line (a small tube placed in your vein using a needle).

The provider will locate your kidney using an ultrasound (machine used to see inside your body) and/or CT scan (special type of x-ray).

Once the provider locates your kidney, they will numb the skin above it on your back.

Then the provider will use a needle to biopsy your kidney.

The provider will insert the needle into your back three, four, or five times. You may feel a pinch or pressure when this happens. You may hear a clicking sound. The provider will ask you to hold your breath when they take the biopsy.

The care team may ask you for a urine (pee) sample or a blood sample before you go home.

5. How long does the biopsy take?

The actual time for the biopsy procedure will be very short, 10-30 minutes. However, the full preparation for the procedure and post-procedure care will take a minimum of 6 hours.

6. Is the biopsy painful?

It is normal to feel some aching in the back after the biopsy.

7. Is anesthesia given during the biopsy?

The study team will apply local anesthesia (ex. Lidocaine) to your skin around the biopsy area. You will be offered conscious sedation but it is not required.

8. Can I drive myself home after the biopsy?

You will not be able to drive yourself home after the biopsy. You will need to arrange for a ride home after the biopsy.

9. Can I go to work after my biopsy?

You may need to take a few days off work after the biopsy, depending on the type of work you do.

10. How long is the recovery time from a biopsy?

The recovery time in hospital is about 4 to 6 hours. The recovery time at home is between one to two weeks.

11. What am I restricted from doing after the biopsy?

Do not swim or soak in water for 24 hours after the procedure.

For up to two weeks after the biopsy you will still need to avoid vigorous activities such as:

- Heavy lifting (more than eight pounds)
- Exercise, contact sports
- Going up long flights of stairs
- Sexual intercourse
- You should avoid driving during this time because slamming on the brakes may put pressure on your kidney

12. Do I need to discontinue medications use before the biopsy?

Depending on what medications you currently take, we may ask you to temporarily discontinue medication use before the biopsy. The study coordinator will provide instructions if you choose to participate in KPMP.

13. What are the risks from the biopsy?

Risks include:

- a. If a CT scan is used to locate your kidney, you will be exposed to radiation
- b. Bruising or pain after the biopsy
- c. Bleeding from the biopsy, which may be mild, moderate or severe.
- d. Very rare risks include a kidney infection, urinary block, inability to pee, damage to organs near kidney, loss of kidney and death

14. How long will the study last?

KPMP will last for at least 10 years.

15. How often are the study follow-up visits?

For chronic kidney disease patients: We will do some study visits by phone and some in person. We will contact you 3 to 4 times in the first month after your biopsy. After that, we will contact you two times a year for the length of the study.

For acute kidney injury patients: We will do some study visits by phone and some in person. We will contact you 5 to 6 times in the first three months after your biopsy. After that, we will contact you two times a year for the length of the study.

16. Can I withdraw from the study?

You can withdraw from KPMP at any time. If you decide to join KPMP, you can change your mind at any time and you won't be penalized or lose any benefits for which you otherwise qualify. If you decide you want to withdraw (quit), we ask that you tell us.

If you withdraw, your record will not be used for new studies. We will stop contacting you. However, if researchers already have your KPMP record, we will not be able to get it back. Also, we will let researchers check the results of past studies. If they need your KPMP record to do this work, we will give it to them.

Even if you withdraw, we will keep your name and contact information. We keep this information so we can follow U.S. research laws and regulations.

17. Will I get the results of the study?

We will give you and your healthcare team results from your kidney biopsy. We will also give you and your healthcare team results that are important to your immediate care, like your blood pressure.

We may have other results for you over time. We will ask your permission before we give them to you or your healthcare team. For example, we will ask if you would like results about your DNA. These results could tell about your risk of developing specific diseases. You will be able to say yes or no to finding out this information. You can say no and still be part of KPMP.

If you want to know about the scientific discoveries we make, visit our website www.kpmp.org.

18. What is done with the study results?

We will remove your name from your KPMP study results and replace it with a code. We will keep your results in a database. Other researchers may use this database to make discoveries about health.

Researchers will use many methods to study your KPMP record. Because KPMP will last for ten or more years, some of these methods may not even be invented yet.

19. Is there any cost to participating in the study?

You do not have to pay any money to participate in KPMP. That said, if you have complications because of participating, your hospital stay or recovery may be longer. This could mean more time off work. If you have to take extra time off work, you may lose wages.

20. Will I receive a medical bill?

You should not receive a medical bill for your participation in KPMP. We will work with you to ensure you do not receive a bill for your participation. If you get hurt because of participating in KPMP, we will pay for your care. If you are hurt and get care at another hospital, you can file a claim with KPMP to pay for those costs.

We and KPMP will only pay if you are hurt because of participating in KPMP. We and KPMP will not pay for care for any health condition you had before taking part in KPMP.