

Lentine et al, *Kidney Med*, "APOL1 Genetic Testing in Patients with Recent African-ancestry and Hypertension: A Pilot Study of Attitudes and Perceptions"

Item S1. Additional References

Friedman DJ, Pollak MR. APOL1 Nephropathy: From Genetics to Clinical Applications. *Clin J Am Soc Nephrol*. 2021;16(2):294-303.

Freedman BI, Julian BA, Pastan SO, et al. Apolipoprotein L1 gene variants in deceased organ donors are associated with renal allograft failure. *Am J Transplant*. 2015;15(6):1615-1622.

Washington HA. *Medical apartheid: The dark history of medical experimentation on Black Americans from colonial times to the present*. Doubleday Books; 2006

Item S2. Detailed Methods

In this pilot study, we offered *APOL1* genetic testing, genetic counseling and assessed the attitudes and concerns related to *APOL1* testing and kidney risk management among self-identified African Americans seen in the Hypertension and Nephrology Clinics at one Midwestern, urban academic medical center. A study coordinator screened potential participants based on review of upcoming clinical schedules including self-reported race in the Patient Demographics form, or by referral from attending physicians from these clinics. For patients who qualified based on self-reported Black race and use of an antihypertensive medication, the study coordinator met with the participants at the clinic to describe the study and obtain informed consent. Participants received a brief explanation of the *APOL1* gene and current understanding of the relationship of renal risk variants with CKD as part of the introduction to the study informed consent process. Participants were offered an honorarium for their time at enrollment and for completion of two follow-up surveys (\$30 USD payment card at each encounter). The study was approved by the Saint Louis University Institutional Review Board (Protocol #29188)

Surveys were administered by the study coordinator to assess patient attitudes and concerns about *APOL1* genetic testing, including attitudes towards hypertension and risk factor management. After the baseline survey at enrollment, blood samples were drawn and sent to the CLIA-approved lab at Mid-America Transplant for *APOL1* genotyping. Two single nucleotide polymorphisms (SNPs) in the *APOL1* G1-renal-risk allele (rs73885319; rs60910145) and an insertion/deletion for the G2-renal-risk allele (rs143830837) were genotyped using a custom assay designed at Wake Forest School of Medicine on the Sequenom platform (San Diego, California) (Freedman BF, *Am J Transplant* 2015). This is the same assay used by Wake Forest in prior publications.

High-risk *APOL1* status among was defined based on having a combination of two *APOL1* renal-risk variants consisting of either G1 or G2 risk alleles (i.e., G1/G1, G1/G2 or G2/G2). Low-risk *APOL1* status was defined based on having one or no risk alleles (i.e., G0/G0, G0/G1, or G0/G2).

The study coordinator contacted patients by phone when genotyping results were available and provided a written copy of results at the next clinic encounter. Genetic counseling by a trained genetics counselor at the University was offered to interested participants at the time of return of results, at no charge. Results were shared only with the patient and not included in the medical record. We abstracted clinical measures including blood pressure, eGFR, urine albumin-creatinine ratio, lipids, fasting glucose, and antihypertensive medication use from electronic medical records at baseline and each of the follow-up encounters.

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We summarized baseline sociodemographic and clinical characteristics overall and by CKD status. Overall survey results are represented using graphs.

Table S1. Selected survey items.

How concerned are you about kidney problems? (CHOOSE ONE ONLY)	Not at all	A little bit	Somewhat	Very much	Extremely	Don't know	Prefer not to answer	
In general, do you think it's a good idea to get genetic testing to find out about if you are at risk for getting a common disease like high blood pressure, diabetes or kidney disease? (CHOOSE ONE ONLY)	Not at all	A little bit	Somewhat	Very much	Extremely	Don't know	Prefer not to answer	
If it were available, how much would you want your children get tested for changes in the APOL1 gene? (CHOOSE ONE ONLY)	Not at all	A little bit	Somewhat	Very much	Extremely	No children	Don't know	Prefer not to answer
Would you be upset about having a test that showed you were at higher risk for kidney disease?	Not at all	A little bit	Somewhat	Very much	Extremely	Don't know	Prefer not to answer	
What would you do if you received a result from the APOL1 genetic testing that showed you had a higher risk for kidney disease? (CHOOSE ALL THAT APPLY + comment)								

Table S2. Survey responses stratified by CKD stage.

Survey item	Overall	Stages 1 to 2 (eGFR ≥60)	Stage 3 (eGFR 30 to 59)	Stages 4 to 5 (eGFR <30)
	N=128	N=38	N=55	N=35
I am concerned about kidney problems, n (%)	120 (94)	36 (94)	50 (91)	34 (97)
It is a good idea to get genetic testing for common disease like high blood pressure, diabetes or kidney disease, n (%)	120 (94)	37 (97)	50 (91)	33 (94)
I would want my children to get tested for changes in the <i>APOL1</i> gene, n (%)	104 (81)	30 (79)	44 (80)	30 (86)
I would be very upset if testing showed I have <i>APOL1</i> high risk variants, n (%)	21 (16)	7 (18)	8 (15)	6 (17)

eGFR, estimated glomerular filtration rate measured in ml/min/1.73 m²