APOL1 Kidney Disease

NEPHCURE®
Kidney International

The rates of severe kidney disease are high in individuals of African and Caribbean descent. This could be attributed to genetic variants in the APOL1 gene found only in individuals with recent African or Caribbean ancestry. These variants greatly increase rates of hypertension-associated kidney failure, FSGS, HIV-associated nephropathy, and other forms of nondiabetic kidney disease.

What is APOL1 FSGS?

Every human being inherits 2 copies of the APOL1 gene, one from each parent. Sometimes, there is a mutation in one or both of the APOL1 genes. Those that inherit two mutations of the APOL1 genes have 10x the risk for developing kidney disease, including a rapidly-progressive form of FSGS. These mutations, or variants, of the APOL1 gene are only found in people of African or Caribbean ancestry.

Black Americans account for **32%** of all kidney failure in the US

Black Americans are **4X** more likely to develop kidney failure than White Americans

31M Americans are affected by some form of kidney disease in the USA

Black Americans make up **13%** of the US population

Approximately **4 in 10** Black Americans on dialysis have kidney failure caused by APOL1

Approximately **1 in 5** people with 2 copies of APOL1 gene variant will develop kidney disease

The APOL1 genetic variants account for **70%** of non-diabetic kidney failure

Many people with the high-risk APOL1 genotype do not show any signs or symptoms of FSGS until kidney failure is approaching.

Knowing if you have the APOL1 gene variants is the key to unlocking the mystery of kidney disease in people with African and Caribbean ancestry.

References:

Friedman, D.J. & Pollak, M.R. (2020, July). APOL1 nephropathy: From genetics to clinical applications. CJASN. https://doi.org/10.2215. CJN.15161219

NephCure Kidney International website (5 May 2019). The Genetic FSGS Discovery Trailblazing Possible Kidney Disease Treatment.