

**INCLUDE 'FSGS' IN THE FY16 DEPARTMENT OF DEFENSE  
PEER-REVIEWED MEDICAL RESEARCH PROGRAM**

***Focal Segmental Glomerulosclerosis (FSGS)***

Focal Segmental Glomerulosclerosis (FSGS) is a disease that attacks the kidney's filtering system (glomeruli) causing serious scarring. FSGS is one of the many causes of Nephrotic Syndrome, which occurs when valuable protein in the blood leaks into the urine (proteinuria). FSGS can cause end-stage renal disease (ESRD), at which point patients require dialysis or a kidney transplant. There is no cure and few treatments for FSGS, and it returns in approximately 30-40% of patients who receive kidney transplants.

***FSGS is a Leading Cause of ESRD***

Kidney disease kills approximately 90,000 Americans a year – more than breast and prostate cancers combined. Idiopathic FSGS is the most common cause of ESRD caused by primary glomerular disease, with African Americans at a 4-fold greater risk than the general population. It is estimated that annually there are 20 new cases of ESRD per million African Americans due to FSGS, and 5 new cases per million Caucasians. This disparity is largely due to variants of the APOL1 gene, which have been associated FSGS. Unfortunately, the incidence of FSGS is rising and there are no known strategies to prevent or treat kidney disease in individuals with the APOL1 genotype.

***ESRD in Veterans and Soldiers***

On average, veterans have a greater burden of chronic kidney disease (CKD) than the general population. Nearly 30,000 veterans suffer from ESRD and an additional 3,000 veterans are expected to reach ESRD each year. Almost 40% of people with ESRD are African American. This health disparity is particularly striking in young African American men of the age typical for active duty service, as rates of kidney disease in men 20-40 years old are as much as 20-fold higher in African Americans than the general population.

***The Costs of ESRD Care are Astronomical***

In 2010, ESRD beneficiaries represented 1.2% of all Medicare beneficiaries and their care accounted for 6.3% of Medicare expenditures at an annual cost of \$32.9 billion. Costs of dialysis provided by Veterans Medical Centers have been estimated to exceed those in private settings, in part because veterans had more comorbidities, outpatient and emergency visits, prescriptions, and longer hospital stays.

***Environmental Impact on FSGS Pathogenicity in the Military***

Researchers suggest there are new opportunities for investigating FSGS in the military population with respect to environmental exposures. An in-depth characterization of military FSGS cases using the Department of Defense serum bank to look at baseline and subsequent exposures could lead to a new area of investigation with immediate relevance to military readiness, troop health and the cost of long term medical care for CKD.

***Include FSGS in the FY16 DOD Peer-Reviewed Medical Research Program***

More research is needed to develop effective therapies for FSGS to halt kidney damage. This is especially imperative as the costs of caring for kidney failure continue grow, as well as the incidence rate of FSGS-caused ESRD. Learning how to prevent and treat kidney damage from FSGS could also improve care for other kidney diseases. New opportunities exist to study FSGS in military service members. Furthermore, kidney disease is an underestimated killer that impacts veterans at a greater rate than the general population.