KIDNEY DISEASE

VA has a comprehensive research portfolio aimed at preventing and slowing the progression of chronic kidney disease and advancing the treatment of kidney failure. There are many causes of chronic kidney disease, but the two main causes—accounting for up to two-thirds of cases—are diabetes and high blood pressure. So in addition to studies directly on kidney disease, VA research on these two related chronic illnesses may also help reduce the prevalence of chronic kidney disease among Veterans.

EXAMPLES OF VA RESEARCH ADVANCES

DIETITIAN CARE IMPROVES SURVIVAL—People with kidney problems who receive dietitian care before starting dialysis have a better chance at survival, says a Minneapolis VAMC study of 156,440 patients. All started hemodialysis between June 2005 and June 2007 and were at least 20 years old. Most—88 percent—did not receive any care from a dietitian. About 9 percent saw a dietitian for 12 months or less, and 3 percent saw one for more than 12 months before starting dialysis. Researchers found that those on predialysis dietitian care for more than 12 months had 8 percent lower mortality during the first year on dialysis, compared with those who had no dietitian care.

BLOOD MARKER MAY PREDICT COMPLICATION RISK—A blood chemical called cystatin C may help identify people at the highest risk of complications from kidney disease. Researchers from the San Francisco VAMC found that cystatin C levels were better than creatinine levels at predicting mortality, cardiovascular disease, heart failure, and kidney failure. The study included 11,909 people. Creatinine is the most widely used marker of kidney function. Cystatin C may also find usefulness as a marker of cardiovascular disease and Alzheimer's disease.

GENE FORM INCREASES RISK OF DIABETES AFTER TRANSPLANT—Men with a certain form of a diabetes-related gene are more likely to be diagnosed with diabetes after kidney transplant. Boston VA researchers and colleagues focused on 575 patients who had kidney transplants over an eight-year period. The patients had no history of diabetes before the transplant. All of them had their DNA analyzed for certain forms of two genes: ADIPOQ and ADIPOR1. Men—but not women—with two copies of a certain form of ADIPOQ were two-and-a-half times more likely to develop diabetes after transplant, compared with men without this form of the gene.

★ **FACTS ABOUT KIDNEY DISEASE—***The kidneys are a pair of bean-shaped, fist-sized organs located on either side of the spinal column. Kidneys perform life-sustaining functions that keep the rest of the body in balance, such as helping to remove waste and excess fluid from the body, regulating water and minerals in the blood, and releasing vital hormones. As kidney disease worsens, complications such as high blood pressure, arteriosclerosis, anemia, weak bones, and nerve damage can develop. If the disease progresses to kidney failure, when the kidneys shut down, dialysis or a kidney transplant is needed to maintain life. Currently, some 26 million adults in the U.S. have chronic kidney disease.*