

## **Racial and Ethnic Differences in Developing End-Stage Renal Disease.**

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Racial-ethnic disparity in end-stage renal disease (ESRD) has been reported in population-based studies, which cannot assess risk factors on an individual basis. This study's objective was to determine racial/ethnic differences in the development of ESRD, using a patient cohort with 10-year follow-up.

Included patients received Medicare reimbursement services in 1992, were age 18-70 in 1992; continued to use Medicare reimbursement services after initial service; and did not initiate ESRD treatment within 45 days of initial service. Eligible patients were followed up to 10 years from the initial service date. The percent of patients who developed ESRD or died during the follow-up was analyzed using  $\chi^2$  test. Survival analysis was conducted for ESRD and death using Cox proportional hazards model, adjusting for age, sex, race and ethnicity.

Of the 565,177 persons in the cohort, 85.5% were white, 9.9% black, and 4.6% other (including Hispanic); 7,613 (1.4%) developed ESRD in the 10-year follow-up, and 156,717 (27.7%) died. The annual percentage of patients who developed ESRD or died increased from 0.15% in year 1 to 0.17% in year 10 for ESRD, and 2.6% to 4.2% for deaths. Overall rates of developing ESRD were 1.1% in whites (1.3% in men and 0.9% in women), 3.5% in blacks (3.4% and 3.6%), and 2.1% in other races (2.2% and 2.1%). The racial-ethnic difference in developing ESRD was observed in each single follow-up year. Black women were 4.3 times, and black men 2.9 times, more ( $P < 0.0001$ ) likely to develop ESRD than their white counterparts. The percent of patients who developed ESRD at age 18-50 (disabled), 51-64 (disabled), and 65-70 was, respectively, 1.0%, 1.5%, and 0.8% in whites; 2.4%, 5.5%, and 3.4% in blacks; and 1.4%, 3.0%, and 1.9% in other races. Blacks were 2.4, 3.2, and 3.7 times more likely ( $P < 0.0001$ ) to develop ESRD than their white counterparts at ages 18-50, 51-64, and 65-70.

We conclude that blacks, particularly black women, have higher risks of developing ESRD than whites, a trend that appears to rise from younger to older patients.