

The objective of this study is to evaluate variations in outcomes of hemodialysis vascular access in the elderly by race/ethnicity” Woo et al (2016).

Abstract:

**OBJECTIVE:** Prevalence of end-stage renal disease, modality of treatment, and type of hemodialysis vascular access used varies widely by race/ethnicity in the United States, but outcomes of hemodialysis vascular access by race/ethnicity are poorly described. The objective of this study is to evaluate variations in outcomes of hemodialysis vascular access in the elderly by race/ethnicity.

**METHODS:** Medicare outpatient, inpatient, and carrier files were queried from 2006 to 2011 for beneficiaries that were age  $\geq 66$  years and dialysis-dependent at time of index fistula/graft creation, qualified for Medicare by age only, and were continuously enrolled in Medicare 12 months before and after index fistula/graft creation. Primary outcome measures were early vascular access failure and 12-month failure-free survival, specifically, the variation in the difference between fistula and graft in non-White vs White race/ethnicity groups.

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**RESULTS:** Fistulas comprised a smaller proportion of index procedures performed in Blacks (65.9%;  $P < .001$ ) and Asians (71.4%;  $P < .001$ ), compared with Whites (78.0%) with no difference in Hispanics (78.7%;  $P = .59$ ). Incidence of early failure after graft vs fistula was Whites, 34.9% vs 43.5% ( $P < .001$ ), Blacks, 32.9% vs 49.1% ( $P < .001$ ), Asians, 30.8% vs 40.5% ( $P = .014$ ), and Hispanics 35.2% vs 43.2% ( $P = .005$ ). The difference in early failure after fistula vs graft in Blacks was significantly larger than the difference in Whites ( $P < .001$ ). The 12-month failure-free survival after index graft vs fistula was Whites 41.9% vs 38.9% ( $P = .008$ ), Blacks 48.5% vs 37.3% ( $P < .001$ ), Asians 51.6% vs 45.2% ( $P = .98$ ), and Hispanics 51.9% vs 42.2% ( $P < .001$ ). The difference in 12-month failure-free survival after graft vs fistula in Blacks and in Hispanics was larger than the difference in Whites ( $P < .001$  and  $P = .02$ , respectively).

**CONCLUSIONS:** Outcomes of fistulas vs grafts in the elderly vary significantly by race/ethnicity. The decreased risk of early failure after graft vs fistula creation is larger in Blacks compared with Whites. The higher failure-free survival at 12 months after graft vs fistula creation is larger in Blacks compared with Whites and trends toward being larger in Hispanics compared with Whites.

Woo, K., Gascue, L., Goldman, D.P. and Romley, J.A. (2016) Variations in outcomes of



hemodialysis vascular access by race/ethnicity in the elderly. Journal of Vascular Surgery.  
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