AFRICAN AMERICAN RACE AS A RISK FACTOR IN OUTCOMES AFTER SECOND AND THIRD KIDNEY TRANSPLANTATION.


* Department of Surgery, Tulane University School of Medicine, New Orleans, LA  
** Department of Biostatistics, Tulane University School of Public Health and Tropical Medicine, New Orleans, LA

Background:  
African Americans (AAs) have been characterized as high-risk primary graft recipients. It is assumed that AA race is a risk for poor outcomes after retransplantation. We aimed to describe patient and graft survival by race after multiple transplants.

Methods:  
178,173 records from the Scientific Registry of Transplant Recipients were retrospectively reviewed from 1987 until 2006. Kaplan-Meier estimates of patient and graft survival after second and third kidney transplant were performed. Cox proportional hazards of graft loss were calculated.

Results:  
48,515 recipients were AAs, and 129,658 were Caucasians (CAs). 7.4% received a second transplant, 24% AAs and 76% CAs (p<0.05). After second transplant compared to CAs, AAs had significantly worse patient and graft survival for the entire observational period (log-rank p<0.0001). 0.5% of patients received a third transplant, 17% AAs and 83% CAs (p<0.0001). After third transplant compared to CAs, AAs had significantly lower patient and graft survival (log-rank p=0.0016). Multivariate adjustment showed donor age (hazard ratio [HR] 1.013, p<0.0001), HLA mismatch (HR 1.58, p<0.0215), acute rejection (HR 1.54, p<0.0001), and AA race (HR 1.4, p<0.0001) were risks of graft loss after second transplant. Similar modeling after third transplant failed to demonstrate any significant risk factors and showed a decreased hazard when donor body mass index was >30 kg/m² (HR 0.35, p=0.04).

Conclusion:  
After second and third kidney transplant compared to CAs, AAs have significantly worse patient and graft survival. AA race is a risk factor of graft loss after second transplant. Disparity research in kidney transplantation should include investigations in outcome beyond the primary transplantation.