

## National analysis of cost and resource utilization of expanded criteria donor kidneys

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### Introduction

Despite efforts to increase the deceased donor pool by increased utilization of expanded criteria donor (ECD) kidneys, concerns have been raised about the financial impact and resource utilization of these organs. We hypothesized that ECD kidneys would be associated with increased short-term costs and resource utilization.

### Methods

The Scientific Registry of Transplant Recipients database was linked to the University HealthSystem Consortium Database to identify adult deceased donor kidney transplant recipients from 2009-2012. Patients were divided into those receiving standard criteria donor (SCD) and ECD kidneys. Length of stay, 30-day readmission rates, discharge disposition, and delayed graft function (DGF) were used as indicators of resource utilization. Cost was defined as reimbursement based on Medicare cost:charge ratios, and included the costs of readmission when applicable.

### Results

Of the 19,529 patients in the final dataset (47.6% of the total SRTR deceased donor cohort), 3,495 were ECD recipients (17.9%). ECDs were more likely to be transplanted into older (median age 62 vs 52), male (63.7% vs 59.3%) and diabetic recipients (47.1% vs. 31.7%); all  $p < 0.001$ . On multivariable analysis, ECD kidneys were associated with increased 30-day readmission (OR: 1.35, CI: 1.21-1.50) and DGF (OR: 1.33, CI: 1.19-1.50) but length of stay (RR: 1.03, CI: 0.97-1.09) and discharge disposition (discharge to home, OR: 1.03, CI: 0.78-1.37) were similar between cohorts. There was no difference in total cost (transplant hospitalization+readmission within 30 days) between ECDs and SCDs (RR: 0.97, CI: 0.93-1.00,  $p=0.07$ ).

### Conclusions

These data suggest that use of ECDs does not negatively impact short-term resource utilization and that ECDs can be more broadly utilized without financial consequences.

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