

# **FACTORS INFLUENCING LONG-TERM OUTCOME AFTER FIRST CADAVERIC KIDNEY TRANSPLANT – ‘HLA TASK FORCE’ COHORT REVISITED**

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## **Introduction**

In 1999 the HLA Task Force of the UK Transplant Kidney and Pancreas Advisory Group reported on analyses of five-year transplant outcome after first adult kidney only transplants from cadaveric heartbeating donors<sup>1</sup>.

As a precursor to new national analyses of kidney transplant outcome, the same cohort of transplants was revisited to investigate factors influencing long-term outcome of kidney transplants.

## **Methods**

The cohort of 6363 transplants in the UK, 1986 – 1993, was validated stringently and follow-up was 98% complete. In the original analysis, year of graft, donor and recipient age, kidney exchange, waiting time, donor cause of death, recipient diabetes and HLA match significantly influenced transplant survival (death with function treated as failure). These same factors were considered in the current analysis.

Collection and validation of long-term follow-up data enabled an analysis of patients whose grafts were functioning six years after transplant to be undertaken using Cox regression models to investigate the impact of prognostic factors.

## **Results**

Of the patients in the original cohort, 3631 (57%) had grafts still functioning six years after transplant. Analysis of these showed earlier graft year, older donor and recipient ages and recipient diabetes to have significant adverse, long-term effects on transplant survival ( $p < 0.001$ ), while there were no long-term effects of other factors.

The risk of failure decreased by 5% in each successive year ( $p < 0.001$ ) while the relative risks (RR) of failure associated with transplants from donors aged 50-59 and those over 60 years, compared with transplants from donors aged 18-29 years, were 1.47 (95% CI 1.25-1.74) and 1.69 (95% CI 1.36-2.09), respectively,  $p < 0.001$ . The significantly increased failure rate for older recipients was attributed to death with function. This was also partly true of the increased risk for diabetic patients compared with non-diabetic patients (RR=1.78, 95% CI 1.44-2.21),  $p < 0.001$ .

## **Conclusion**

For patients with functioning grafts after six years, older donor age and presence of diabetes continue to have a significantly detrimental influence on further survival, while there continues to be a significant year-on-year improvement in long-term outcome.

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<sup>1</sup> Morris PJ et al. Analysis of factors that affect outcome of primary cadaveric renal transplantation in the UK. *Lancet* 1999; 354:1147-1152