GLOSSARY

CONFIDENCE INTERVAL (CI)
An estimated range of values (based on a given set of sample data) that has a specified probability of containing the value being estimated

EXPANDED CRITERIA DONORS (ECDs)
Deceased kidney donors older than 59 years, or donors aged 50–59 years with two or more of the following: serum creatinine concentration >132.6 μmol/l (1.5 mg/dl); history of hypertension; death caused by cerebrovascular accident

TRANSCRIPTION FACTOR
Any of the DNA-binding proteins that interact with the regulatory DNA sequences to control gene expression

QUANTITATIVE POLYMERASE CHAIN REACTION
Identifying a specific DNA or RNA sequence and quantifying how many copies there are relative to a normalized internal control sequence

each group did not survive 6 months of follow-up. The composite endpoint of death, dialysis dependence, or estimated glomerular filtration rate <30 ml/min/1.73 m^2 occurred at a similar frequency in the two groups (difference in frequency 11.3%; $P = 0.36$); nevertheless, the wide 95% CI associated with these frequencies (–8.3% to 29.1%) indicates that the treatment might have been of benefit to some patients, while harming others.

In two prior randomized trials, the effect of plasma exchange on myeloma-associated acute renal failure might have been confounded by factors such as variation in additional interventions (e.g. dialysis) and in disease severity. Despite the consequently conflicting and inconclusive results of these studies, plasma exchange is often recommended for this indication. The larger sample size and improved study design of the present trial might make it the most accurate to date, casting doubt on the validity of such recommendations.

Rachael Williams

Original article Clark WF *et al.* (2005) Plasma exchange when myeloma presents as acute renal failure: a randomized, controlled trial. *Ann Intern Med* **143:** 777–784

Allocation of expanded criteria donor kidneys: should the system be revised?

Nearly 42% of all patients on the US renal transplant waiting list, including 31% of all candidates younger than 40 years, have chosen to accept kidneys from EXPANDED CRITERIA DONORS (ECDs). A retrospective analysis of data from the US Scientific Registry of Transplant Recipients has revealed, however, that many of these self-selected patients would derive no survival advantage from earlier ECD transplantation compared with waiting for a non-ECD kidney.

The analysis included recipients of kidneys from deceased ECDs ($n = 7{,}790$), and from living or deceased non-ECDs ($n = 56{,}255$), as well as wait-listed patients who did not undergo renal transplantation ($n = 45{,}082$). A greater percentage of patients in the ECD group died during the first two post-transplant weeks than in the other groups. Despite this, after 3.5 years, the cumulative survival rate of recipients of kidneys from ECDs slightly exceeded that of patients who received non-ECD grafts plus those who remained on dialysis (76% vs 75%, respectively, at 5 years). ECD transplant recipients had a lower adjusted risk of death beyond 33 weeks post-transplantation.

Subgroup analyses showed that receipt of ECD-derived kidneys conferred a significant survival benefit upon specific patient cohorts (those older than 39 years, those with diabetes and those who had been wait-listed for >1,350 days; $P<0.001$ for all) but others (those younger than 40 years and those who had been wait-listed for 1,350 days) did not derive any significant survival benefit.

These results might spur decision makers to develop an allocation policy for ECD kidneys based on age, presence of diabetes and waiting time. Patients should at least be advised of their own likely individual survival benefit when deciding whether to accept an ECD kidney.

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Original article Merion RM *et al.* (2005) Deceased-donor characteristics and the survival benefit of kidney transplantation. *JAMA* **294:** 2726–2733

FOXP3 mRNA in the urine of renal allograft recipients predicts outcome of acute rejection

Acute rejection is a key risk factor for renal allograft failure. The outcome of rejection is difficult to predict; however, measuring levels of messenger RNA (mRNA) for immunological components of rejection provides a noninvasive method for monitoring the events that lead to graft failure. Regulatory T cells are a subset of T cells that can be identified by their specific expression of the FOXP3 TRANSCRIPTION FACTOR, and which are involved in maintaining transplant tolerance. Muthukumar *et al.* investigated whether the levels of *FOXP3* mRNA in urine could predict outcome in renal allograft recipients undergoing acute rejection.

In their study, the levels of *FOXP3* mRNA in cells taken from urine were measured by QUANTITATIVE POLYMERASE CHAIN REACTION in allograft recipients with acute rejection ($n = 36$), chronic allograft nephropathy ($n = 18$) and normal biopsy results ($n = 29$). Patients with acute rejection had the highest levels of mRNA for *FOXP3*. Following antirejection therapy, acute rejection was reversed in 26/36 patients; this group had significantly higher *FOXP3* mRNA levels than the 10 patients whose rejection progressed ($P = 0.001$). The combination of levels of *FOXP3*