

## Outcome of renal transplantation in systemic amyloidosis

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### Introduction

Systemic amyloidosis accounts for approximately 0.8% of end stage renal disease (ESRD) in the UK. Outcomes following renal transplantation in systemic amyloidosis were historically poor, but there is a paucity of data on renal transplant outcomes following recent therapeutic advances which have benefitted patients with systemic amyloidosis generally. We sought to determine renal allograft and patient survival in UK patients with ESRD from systemic amyloidosis.

### Method

Outcomes following renal transplantation among 94 patients with systemic AA and AL amyloidosis being followed at the UK National Amyloidosis Centre (NAC) who underwent renal transplantation between 1989 and 2018 were compared with those of age-matched renal transplant recipients with diabetic and non-diabetic nephropathy held in the NHSBT database.

### Results

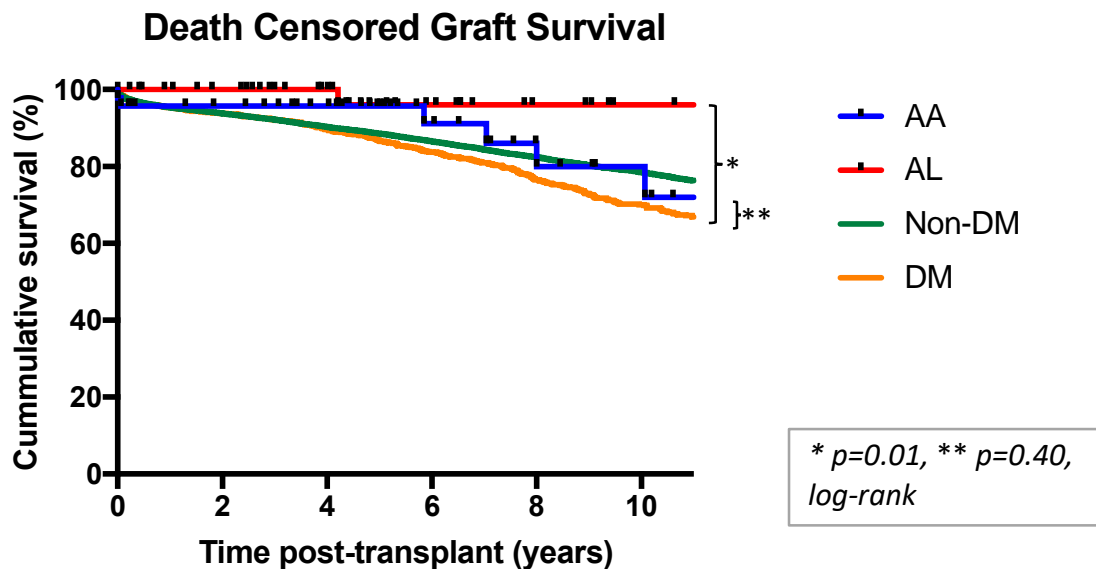


Figure 1. Death censored graft survival with aged-matched diabetic and non-diabetic recipients

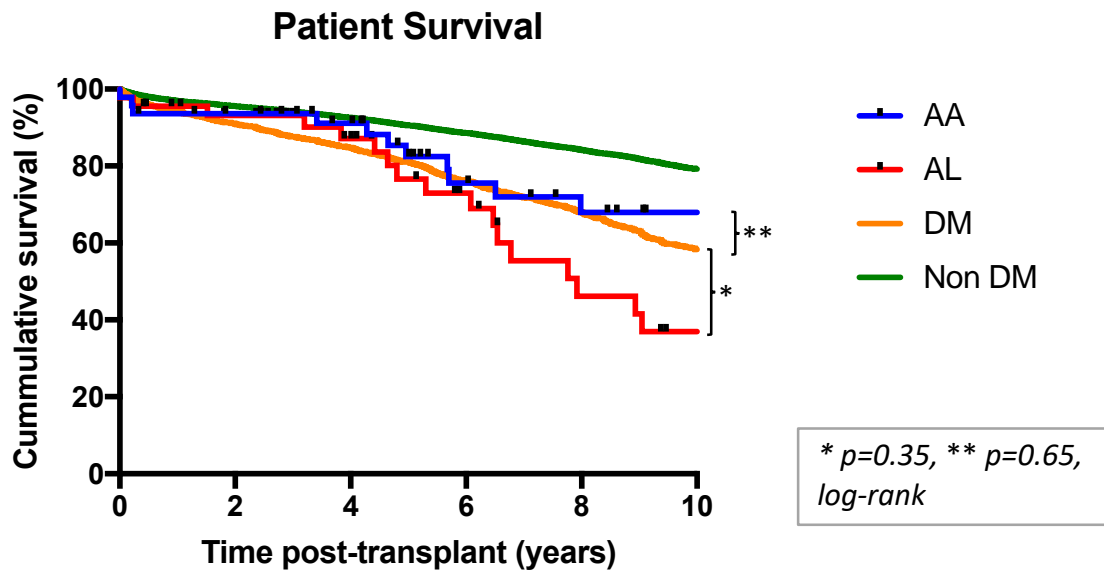


Figure 2. Patient survival with aged-matched diabetic and non-diabetic recipients

Death-censored graft survival was 96%, 96%, 96% and 81% in AA, and 98%, 98%, 93% and 93% in AL amyloidosis at 1, 3, 5 and 10 years respectively. Overall patient survival was 92%, 92%, 81% and 68% in AA and 95%, 93%, 76%, 34% in AL amyloidosis at 1, 3, 5, and 10 years respectively. Twenty-five amyloidosis patients died with a functioning renal allograft and 9 suffered allograft loss, 3 within a month due to operative complications or rejection, 3 from recurrent amyloid (all AA) and 3 multifactorial but with recurrent amyloid (1AL, 2AA).

## Discussion

Patient and renal allograft survival following renal transplantation in AA amyloidosis is similar to that in diabetic nephropathy. Despite excellent death-censored renal allograft survival in AL amyloidosis, reflecting prevention of recurrence of amyloid in renal allografts due to successful suppression of the underlying clonal dyscrasia with chemotherapy, patient survival following renal transplantation in this cohort was inferior to age-matched diabetic controls. This data indicates that carefully selected patients with systemic amyloidosis can achieve good outcomes following renal transplantation.