Highly sensitized patients can wait many years for an offer of a transplant due to the many unacceptable antigens listed with UK Transplant. We have previously reviewed the results of the flow cytometric crossmatches performed in 35 patients with pre-formed donor specific antibodies. The flow cytometric crossmatch was positive in 22 cases and in every such case Luminex Single Antigen Bead testing demonstrated at least one preformed donor specific antibody present at a value above 4,500 MFI and the cumulative antibody level was always above 5,000 MFI.

On this basis we reviewed the individual antibody profiles of our centre’s cohort of highly sensitized, longwaiting patients and delisted those antibodies present at MFI below 5,000. In some patients in whom there were multiple sensitizations this did not result in a fall in the calculated Reaction Frequency but in others the reduction was very significant and, although the median calculated Reaction Frequency (cRF) only fell from 100% to 95%, the median number of listed unacceptable antigens was halved from 41 to 21 and the un-sensitized cohort of our transplant waiting list rose from 12.5% to 27.5%. Using the new UK transplant matching tool this resulted in a predicted increase in the median number of potential tier 1-3 donors from 5 in 10,000 to 112 in 10,000 donors.

Over the past two years, 10% of transplants at this hospital have been from this cohort of highly sensitised patients in whom antibodies were delisted. We have reviewed outcomes of the first eleven of these cases and compared them to those of a control group matched on the basis of recipient, donor and transplant factors. Patient and graft survival was 100% in both the delisted and control groups at one year. There was no significant difference in graft function between the two groups at six months (mean eGFR 50.3 ml/min compared to 51.3 ml/min respectively) or at one year (mean eGFR 48.1 ml/min compared to 50.5 ml/min respectively). In both groups, four patients had a single biopsy each. Biopsy-proven rejection was identified in two patients from the control group but was not identified in any of the delisted patients. Data regarding the length of admission for transplantation and the number and duration of subsequent admissions did not demonstrate any differences between the two groups.

Since the introduction of the delisting programme, the number of patients waiting longer than 1000 days for a transplant has reduced from 23 to just seven. It is noteworthy that some of these transplants have been from living donors who were previously excluded due to unacceptable antigens.