Methods: The study population comprised 59 patients (32% females, 78% Caucasian) transplanted at our institution between 1/1/09-5/31/12 who developed biopsy-proven antibody mediated rejection (C4d positive, with or without peritubular capillaritis and/or glomerulitis) in the absence of detectable HLA-donor specific antibodies (DSA) by Luminex single antigen bead testing.

Results:
A total of 12 graft losses and 7 deaths occurred over a median follow-up time of 30.5 months. Both a 0% cPRA and occurrence of delayed graft function (DGF) predicted graft loss after adjustment for age and gender (Table 1). Associations of 0% cPRA, DGF(p=0.06) and >3 HLA mismatches with patient death approached significance in univariate analysis. Of note, only 1 patient went on to develop subsequent detectable de novoDSA in this high risk group within a 1 year follow up period.

Risk Factor Hazard Ratio (95% confidence interval) P value

Previous transplantation 6.1 (0.47,80) 0.16

0% cPRA 25.9 (1.4,266) 0.02

HLA mismatch>3 7.6 (0.67,64) 0.10

Delayed graft function 2.2 (0.94,12.3) 0.06

Conclusions: Despite the absence of detectable HLA-DSA by conventional single antigen bead testing, patients with biopsy-proven antibody mediated rejection remain at a substantial risk of graft loss. Further, the risk of graft loss in these patients is highest in those without detectable HLA allo sensitization, suggesting a role for other non-HLA auto- or alloreactive antibodies in mediating graft injury, or possible local deposition of HLA-DSA that are not detected in the circulation.

Abstract# A140
IgG Donor Specific Antibodies [DSAs] in Patients With Transplant Gomerulopathy [TG] Are Associated With Inferior Allograft Survival. C. Clarke,1 C. Lawrence,1 W. Willicoke,1 K. Shiu,2 P. Brooke3, C. Roufosse,3 T. Cook,3 A. Dorling,2 D. Taube,1 J. Galliford1. 1Imperial College Renal and Transplant Centre, Imperial College NHS Trust, London, United Kingdom; 2Renal, Urology and Transplantation Directorate, Guy’s and St Thomas’ NHS Foundation Trust, London, United Kingdom.

Transplant glomerulopathy (TG) is a manifestation of chronic AMR with a poor prognosis and no specific treatment. Although the association between TG and anti-HLA antibodies [Abs] is well known, there are few studies linking the nature of these Abs to outcome. 55 patients with TG (33M, 22F, mean age 47.5±12.1 yrs, mean time to TG diagnosis 9.32±8.3 yrs, mean follow up 26.6±18.0 months) were studied. Stored serum samples from the time of TG diagnosis were analysed for the presence of IgG and IgM HLA, DSA and Complement fixing antibodies. 52/55 (94.5%) patients were HLA Ab+, 3/55 were IgG HLA Ab- and 1 patient was IgM HLA Ab+. 27/55 (49.1%) had IgG HLA-DSAs, 2/27 had class I alone, 15/27 had class II alone and 10/27 had both class I+II. Overall 39/55 (69.1%) patients had Abs directed against DQ (21/39 were DSAs, 18/39 were HLA). 24/55 (43.6%) had IgG HLA-DSAs, 18/24 (75%) lost their allograft function. Graft survival rates at 1 year post-transplantation were 100%, in the ‘type I’ group, 97.6%, in the ‘type II’ group, and 25.0% in the “type III” group. There were significant differences among the three groups in graft survival (P<0.001), and in patients survival (P=0.001). There were no significant differences among the three groups in the donor and recipient characteristics, and immunologic factors (number of HLA mismatch, number of KT, cross-match positivity, PRA>20%, PRA>50%, strong donor-specific anti-HLA antibody with a median fluorescence intensity [MFI] at diagnosis).

Conclusion
Compared with Type I & II AAMR, Type III AAMR had inferior graft and patient survival. But among the three groups, there were no significant difference in patient characteristic and immunologic factors. Additional study is needed to find out the strongest predictor for development of type III AAMR.

Abstract# A142

Objective: Anti-HLA antibodies post transplant follow up has been suggested by several studies as a useful tool to identify patients with acute or chronic rejection risk, and therefore useful to implement the necessary therapeutic measures that would help us minimize its clinical impact. Materials and Methods: We had carried out a transversal and prospective study of 342 kidney recipients. Anti-HLA antibodies were tested using Luminex technology, screening and single antigen (Genprobe). The median number of tests performed per patient was 3.3. Single antibody with MFI>1500 and specificity against any HLA donor antigen, determined by HLA-A/B/DR typing or linkage disequilibrium when compared with the patient type III was lost their allograft function. Graft survival rates at 1 year post-transplantation were 100%, in the ‘type I’ group, 97.6%, in the ‘type II’ group, and 25.0% in the “type III” group. There were significant differences among the three groups in graft survival (P<0.001), and in patients survival (P=0.001). There were no significant differences among the three groups in the donor and recipient characteristics, and immunologic factors (number of HLA mismatch, number of KT, cross-match positivity, PRA>20%, PRA>50%, strong donor-specific anti-HLA antibody with a median fluorescence intensity [MFI] at diagnosis).

Conclusion
Compared with Type I & II AAMR, Type III AAMR had inferior graft and patient survival. But among the three groups, there were no significant difference in patient characteristic and immunologic factors. Additional study is needed to find out the strongest predictor for development of type III AAMR.