

suPAR in transplant patients with FSGS recurrence

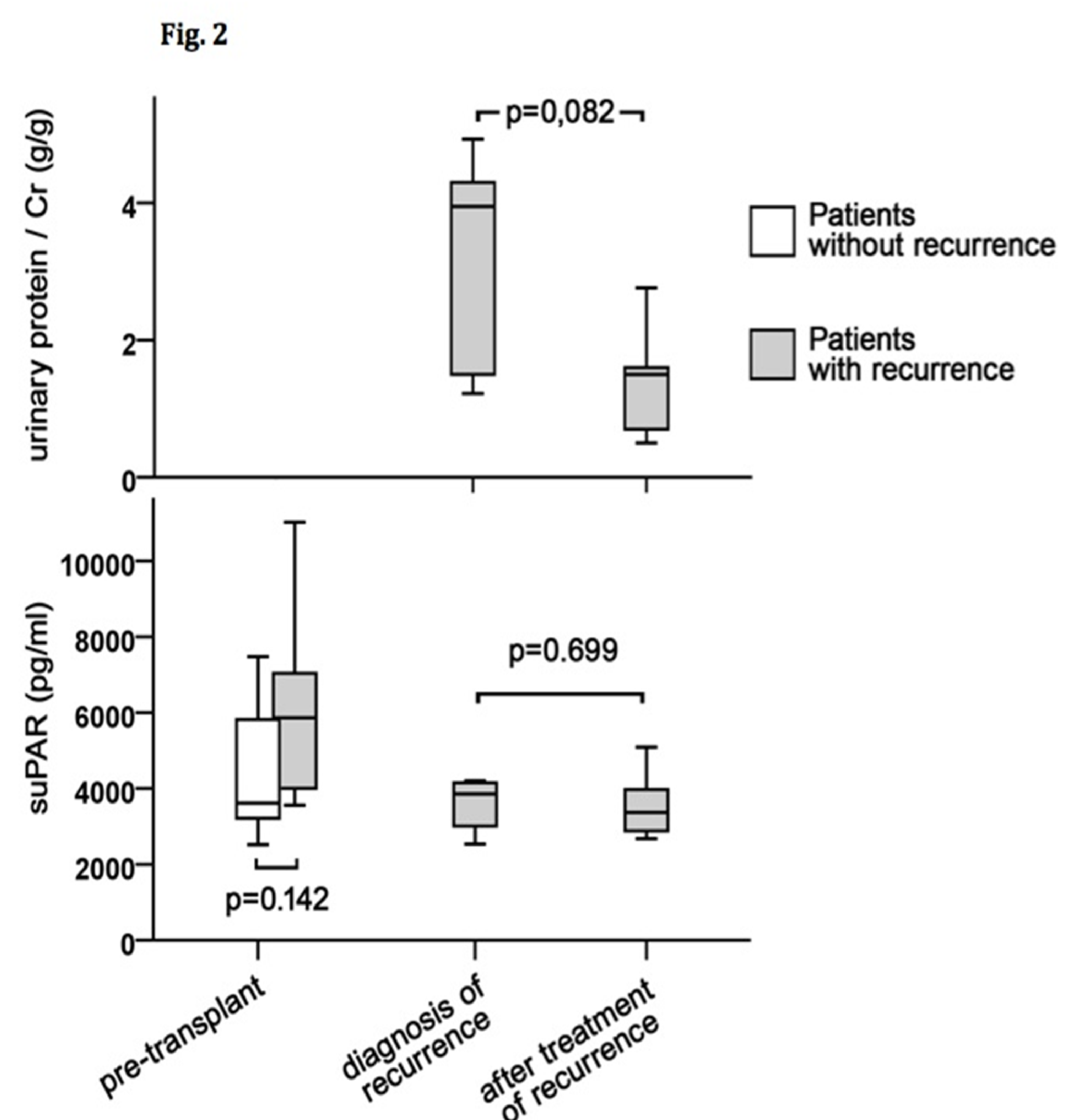
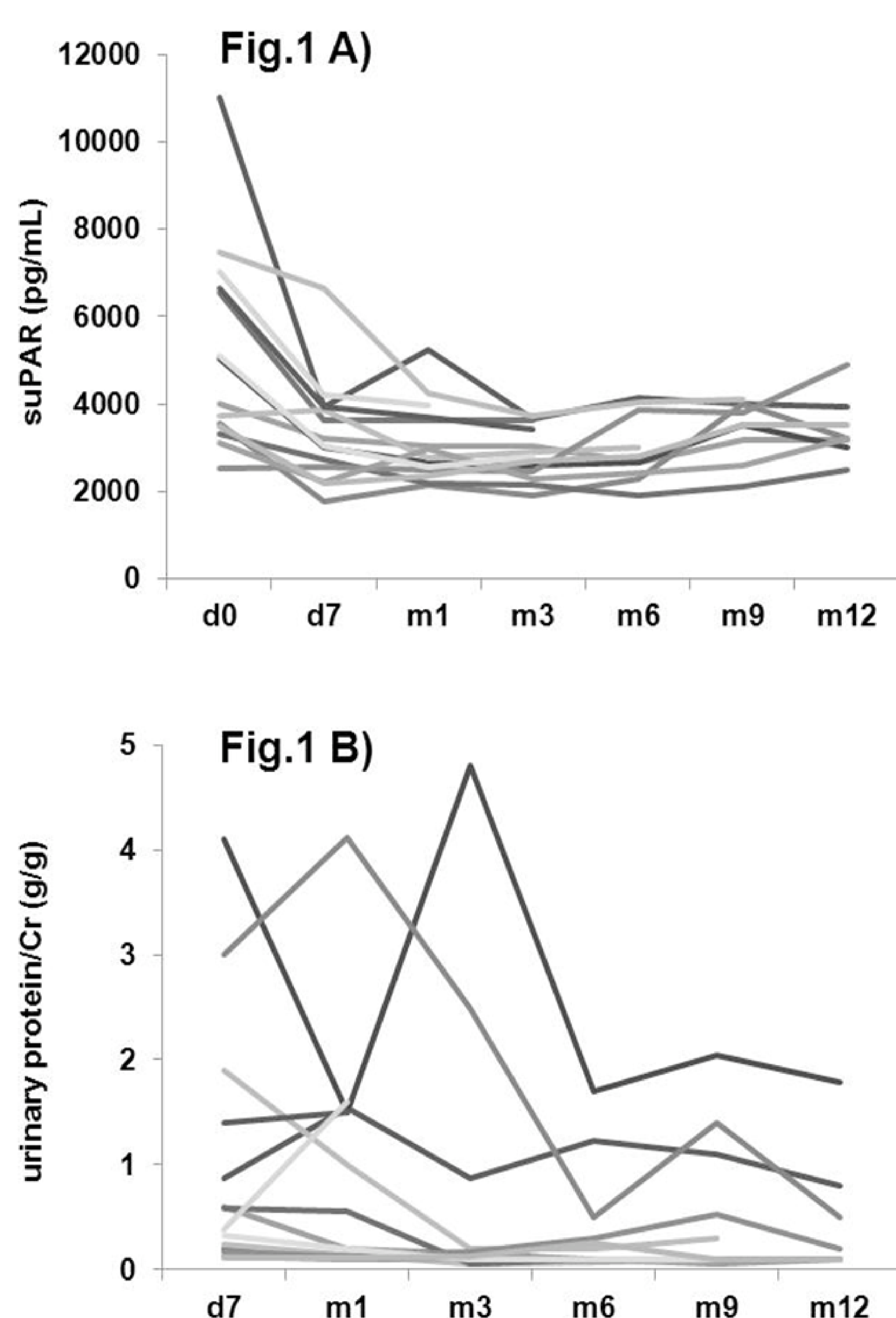
Fabian Halleck, Dmytro Khadzhynov, Hans-H. Neumayer, Klemens Budde and Oliver Staeck

Department of Nephrology, Charité Universitätsmedizin
Berlin, Germany

Background: Recent studies revealed suPAR (soluble urokinase-type plasminogen activator receptor) as a new marker for podocyte damage in patients with FSGS. The purpose of this study was to prospectively investigate pre- and post-transplant serum suPAR levels and their association to the clinical course of FSGS recurrence.

Methods: In this prospective single-center study 14 patients with end stage renal disease and histologically proven FSGS were included. The serum samples for suPAR measurement were obtained pre-transplant (d0) and post-transplant (d7, m1, m3, m6, m12). Recurrence was diagnosed by clinical presentation (progress of proteinuria and/or graft deterioration) and transplant biopsy.

Results: suPAR levels decreased significantly after transplantation (median 4528 pg/ml (3890-8033) pre-transplant vs. 3473 pg/ml (3143-3955) at last visit, $p < 0.001$). The time course of suPAR levels and proteinuria is shown in Fig.1. Six patients developed FSGS recurrence. All patients with FSGS recurrence were refractory to plasmapheresis alone and received rituximab infusion, intensified CyA and steroid regimen. Three patients achieved complete remission, two partial remission. One patient became anuric due to severe FSGS recurrence and returned to dialysis 3 months after transplantation. Recurrence of FSGS was accompanied by substantial proteinuria (median 4.0 g/g (1.4-4.5)) which decreased during therapy (median 1.5 g/g (0.6-2.2)). There were no significant changes of suPAR levels during the course or after the treatment of recurrence (Fig.2).



Conclusions: FSGS patients show a decline of suPAR levels during the time of transplantation. As previously described patients with FSGS recurrence tend to have higher pre-transplant suPAR levels. While rising proteinuria is predictive for recurrence in the context of our study suPAR levels did not correlate with the course of FSGS recurrence.

