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Abstract: Monoclonal free light chains are the principal cause of severe renal failure in patients with multiple myeloma. Increasing evidence suggests that targeting early reductions in serum concentrations of free light chains is associated with improved clinical outcomes. Further work is required to determine whether direct removal of free light chains from the serum provides any additional benefit to effective chemotherapy alone.

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Dear editor, in a recent issue of Annals of Hematology Matsue *et al* [1] report the outcomes of a population of patients with severe renal failure secondary to multiple myeloma. Of particular note, the authors highlight that where serum free light chains (FLC) were measured (five patients) an early reduction in their concentrations was associated with renal recovery. This data is supported by two larger case series which report 40 and 20 patients with severe renal failure and myeloma [2,3]. These series independently demonstrated renal recovery to be associated with an early reduction in serum FLCs of greater than 50%.

How this reduction in serum FLCs is achieved, and whether direct removal of FLCs from the serum has a role, remain to be determined. Undoubtedly effective chemotherapy is essential, without which direct removal can have little impact on circulating FLC levels [4]. Historically, plasma exchange has been used to aid this reduction [5], more recently however a novel method for FLC removal, high cut-off haemodialysis, has been demonstrated to have an increased capacity [4]. The potential benefit of FLC removal in this setting, relates to the extended serum half lives of FLCs in renal failure, which result serum concentrations remaining high even when chemotherapy has been effective. This is likely to translate to the time to renal recovery. In line with other series which used novel chemotherapy agents in this setting [6,7], Matsue *et al* [1] report a high rate of independence of dialysis. However, the median time to independence of dialysis, 2 months, is uncharacteristically long for an acute kidney injury. Potentially if serum FLCs were reduced more rapidly, using direct removal to overcome the prolonged serum half-lives, the duration of dialysis dependence would be shorter. This hypothesis is currently being evaluated by the European Trial of Free Light Chain Removal by Extended Haemodialysis in Cast Nephropathy (EuLITE) [8], a multi-centre randomised controlled trial based in the United Kingdom and Germany.

Currently we can conclude that recent use of novel chemotherapy regimes in patients with renal failure secondary to multiple myeloma has resulted in improved outcomes for this population. Further work in now required to determine whether therapeutic strategies for directly removing FLCs from the serum can provide an additional benefit.

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