Background and aims Pre-emptive immunosuppressive treatment for asymptomatic serological activation (ASR) in lupus nephritis (LN) patients remains controversial, and its impact on subsequent flare rate and long-term renal outcome is unclear.

Methods We conducted a retrospective study on all episodes of ASR in 1993–2015 to investigate the relationship between pre-emptive treatment and subsequent clinical flares and renal outcomes.

Results 138 episodes of ASR occurred in 98 patients during the study period. 53 episodes (in 38 patients) were treated with pre-emptive increase in immunosuppression while 85 episodes (in 60 patients) were not, and patients were followed up for 88.8±77.3 months and 82.8±89.7 months respectively after ASR occurred. Pre-emptive treatment was associated with superior renal relapse-free survival (100%, 95% and 90% at 6, 12 and 24 months respectively) compared with no pre-emptive treatment (93%, 68% and 65% respectively, p=0.007), while extra-renal relapse-free survival did not differ between the two groups (Figure 1). 5 (9.4%) of 53 ASR episodes treated pre-emptively developed renal flare at 14.3±6.7 months after ASR. Patients who received pre-emptive treatment for ASR and did not develop renal flares showed also better eGFR slope (+0.54±0.43 ml/min/1.73 m²/year) compared with the non-pre-emptive groups with or without renal flares (0.21±0.50 and 1.00±0.33 ml/min/1.73 m²/year respectively, p=0.001 and 0.012) (Figure 2). Pre-emptive treatment was associated with more gastrointestinal adverse events related to increased mycophenolate dose (p=0.031). Infection rate was similar between both groups.

Conclusions Renal flares have a negative impact on renal function and pre-emptive treatment for ASR could reduce renal flare risk and its consequences in LN patients.