Background/Purpose Anti-carbamylated protein antibodies (anti-CarP) have been described not only in Rheumatoid arthritis but in other systemic autoimmune diseases. Recently, they have been reported in different cohorts of Systemic Lupus Erythematosus (SLE) with a prevalence of 9–28% in patients selected with arthritis/arthralgias. Anti-CarP have been proposed as a marker of erosive arthritis in SLE. The aim was to assess the prevalence of anti-CarP in SLE patients from a single center cohort and their association to clinical and laboratory data.

Methods Serum anti-CarP levels were evaluated using a homed-made ELISA (nv<3.40 AU/ml). Clinical data were obtained from clinical charts.

Results Complete clinical and serological data were available for 314 consecutive patients: 85 (27%) positive and 229 (73%) negative. No association was found among CarP+ and arthritis/arthralgias. CarP+ patients presented an earlier disease onset compared with CarP- (mean 28±11 vs 32±14.7, p=0.001), a trend towards a higher prevalence of xerophtalmia (36% vs 26.5%, p=0.075; OR:1.62, 95% CI:0.95–2.75) and extractable nuclear antigen positivity (67% vs 54%, p=0.064; OR:1.65, 95% CI:0.97–2.8). Interestingly, patients anti-CarP+ less frequently experienced class IV glomerulonephritis (12%vs 21.8%, p=0.05; OR:0.53, 95% CI:0.26–1.08). Fifty-six patients evaluated were treated with anti-Blys therapy and longitudinally sera were available (T0, T6, T12). At baseline anti-CarP were positive in 10 (17.8%) and titre significantly decreased at T6 (p=0.006) and T12 (p=0.01). Negative seroconversion was observed in 7/10 sera.

Conclusions The prevalence of anti-CarP antibodies found in our unselected cohort is in line with what previously reported. In our hands, anti-CarP antibodies seems to identify a less severe form of SLE, with less kidney involvement and probably in overlap with Sjögren disease. Further studies are needed in order to be able to identify a possible role for this autoantibody.