

CONNECTIVE TISSUE DISEASES

Kidney damage is a key predictor of mortality in SLE

Despite significant improvements in the management of systemic lupus erythematosus (SLE), the mortality rate in patients with this disease remains high. Previous studies have shown that the accumulation of irreversible organ damage, as determined by the Systemic Lupus International Collaborating Clinics/American College of Rheumatology Damage Index (SDI), together with measures of disease activity and socioeconomic status, can reliably predict long-term survival in patients with SLE. Investigators from the USA have now shown that, of all the domains of the SDI, renal damage is the most important predictor of mortality in SLE.

Using data from the large, multiethnic LUMINA (Lupus in Minorities: Nature vs Nurture) LXIV cohort, Danila *et al.* first identified a significant association between SLE-associated mortality and four specific damage domains of the SDI: cardiovascular, renal, pulmonary

and peripheral vascular. On multivariate analysis, however, only the renal and cardiovascular domains remained significant. The researchers then used a Cox proportional hazards regression model to determine whether accumulated cardiovascular or renal damage, as measured by the SDI, could predict survival independent of other factors known to be associated with death in SLE, including age, sex, poverty and disease activity (as measured by the revised SLAM [Systemic Lupus Activity Measure] scale). The investigators found that, of the two domains, only accumulated renal damage was independently associated with a shorter time to death in this cohort—but only if poverty was excluded from the analysis.

As well as underscoring the vital role of poverty as an independent predictor of long-term disease survival, these findings draw attention to the importance of monitoring and treating renal involvement



in patients with SLE. “We need to be aggressive in preventing renal damage by identifying renal flares early and treating them quickly,” says Maria Danila, the study’s lead

investigator. “However, better disease activity markers and safer, more specifically targeted therapies need to be discovered for this approach to become a reality,” concludes Danila.

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Original article Danila, M. I. *et al.* Renal damage is the most important predictor of mortality within the damage index: data from the LUMINA LXIV, a multiethnic US cohort. *Rheumatology (Oxf.)* [doi:10.1093/rheumatology/kep012] (2009).