Patients with active LUPUS NEPHRITIS are losing time and nephrons.

Delayed diagnosis, delayed adequate treatment, or patient experiencing a flare of lupus nephritis signals nephron loss, putting their long-term kidney health at risk... 

FOR HEALTHCARE PROFESSIONAL USE ONLY.
Despite an improved prognosis over recent decades, LUPUS NEPHRITIS POSES CHALLENGES RELATED TO TREATMENT AND IS LINKED TO INCREASED MORBIDITY AND MORTALITY\textsuperscript{7,8}

Lupus nephritis may develop in up to 40\% of patients with SLE.\textsuperscript{8}

Prevalence of lupus nephritis is higher in women vs. men across all age groups.\textsuperscript{9-11}

Black and Hispanic people tend to have higher serum creatinine levels and more proteinuria than white patients at lupus nephritis diagnosis.\textsuperscript{12}

Up to 19\% of patients with lupus nephritis progress to end-stage renal disease within 10 years of diagnosis.\textsuperscript{7,13}

\textsuperscript{SLE: systemic lupus erythematosus.}
ACTIVE LUPUS NEPHRITIS LEADS TO LOSS OF RENAL FUNCTION

It may lead to early onset of ESRD vs. normal aging\textsuperscript{2,14}

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Immunity against lupus autoantigens leads to inflammation of kidney. This inflammatory response eventually causes nephron loss thereby impacting renal function\textsuperscript{2,5}

Every flare contributes to progression to kidney failure\textsuperscript{2,4,5}

It is suggested that nephron loss caused by lupus nephritis is irreversible\textsuperscript{2}

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Implied risk of ESRD in patients with lupus nephritis over lifetime\textsuperscript{2}

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CKD: chronic kidney disease; ESRD, end stage renal disease; GFR: glomerular filtration rate; LN: lupus nephritis.
ACTIVE LUPUS NEPHRITIS IS ASSOCIATED WITH INCREASED RISK OF KIDNEY FAILURE AND DEATH\textsuperscript{13,15,16}

In a cohort study (N=1827), patients in the Systemic Lupus International Collaborating Clinics inception cohort (≤15 months of SLE diagnosis) were evaluated to estimate HRQoL and the cumulative incidence function for the time until ESRD. Once diagnosed with lupus nephritis, patients had:\textsuperscript{15,*}

\textbf{Adjusted risk of kidney failure and death once diagnosed with lupus nephritis}\textsuperscript{15,**}

\begin{itemize}
  \item \textbf{45x} greater risk of kidney failure (P<0.001)
  \begin{itemize}
    \item (HR: 44.7, 95\% CI: 6.1, 329.7)
  \end{itemize}
  \item \textbf{3x} greater risk of death (P=0.002)
  \begin{itemize}
    \item (HR: 3.2, 95\% CI: 1.6, 6.5)
  \end{itemize}
\end{itemize}

*Analysis of Systemic Lupus International Collaborating Clinics inception cohort of newly diagnosed patients enrolled between 1999 and 2012, who were followed for a mean of 4.6 years. A total of 1827 patients were recruited, of whom 700 had lupus nephritis over the course of follow-up.\textsuperscript{15}

**Adjusting for gender, age at enrolment, and race/ethnicity, a Cox regression analysis on the competing risks of kidney failure and death, with the diagnosis of lupus nephritis used to define a time-dependent covariate.\textsuperscript{15}

CI; confidence interval; ESRD, end-stage renal disease; HR; hazard ratio; HRQoL, health related quality of life; SLE, systemic lupus erythematosus.
The subtle and progressive nature of lupus nephritis underscores the importance of active surveillance.\textsuperscript{8,17,19,20}

**Lupus nephritis guidelines\textsuperscript{8,17,18}**

<table>
<thead>
<tr>
<th>RECOMMENDATION</th>
<th>KDIGO\textsuperscript{18}</th>
<th>EULAR/ERA-EDTA\textsuperscript{8,17}</th>
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</thead>
<tbody>
<tr>
<td>Active surveillance for LN in patients with SLE</td>
<td>Regular monitoring</td>
<td>At least every 3 months in those with high risk of kidney involvement</td>
</tr>
</tbody>
</table>
| Criteria for kidney biopsy                  | • 24-hour proteinuria ≥500 mg/dl  
• Unexplained decrease eGFR | • Proteinuria ≥0.5 g/24 hr  
• Glomerular haematuria and/or cellular casts  
• Unexplained decrease in GFR |
| Kidney biopsy                               | Recommended for classification and treatment | Recommended for classification and treatment |
EULAR/ERA-EDTA AND KDIGO GUIDELINES RECOMMEND EARLY REDUCTION IN PROTEINURIA OVER FIRST YEAR OF TREATMENT

EULAR/ERA-EDTA specifies that “Goals of treatment include patient survival, long term preservation of kidney function, prevention of disease flares, management of comorbidities and improvement in disease-related quality of life”.

It is suggested that by achieving proteinuria reduction ≤0.5 g/day (equivalent to ≤0.5 g/g) at 12 months predicts a 92% likelihood of maintaining kidney function at 10 years.

Guidelines recommend target proteinuria decrease of


**For KDIGO:** Adapted from KDIGO 2021. *Kidney International.* 2021;100:S1-S276.

* Patients with nephrotic-range proteinuria at baseline may require an additional 6 to 12 months to reach complete clinical response; in such cases, prompt switches of therapy are not necessary if proteinuria is improving.

** Units of UPCR can vary based on geography.

PATIENTS WITH ACTIVE LUPUS NEPHRITIS ARE LOSING TIME AND NEPHRONS\textsuperscript{1,2}

Delayed diagnosis and inadequate treatment, or patient experiencing a flare of lupus nephritis signals nephron loss, putting patient’s \textit{long-term kidney health at risk}\textsuperscript{1-6}

Lupus nephritis is a frequent and serious complication of SLE, increasing the \textit{risk of kidney failure and death}\textsuperscript{2}

EULAR/ERA-EDTA guidelines recommend \textit{active surveillance every 3 months} for lupus nephritis in patients with SLE at high risk of developing renal involvement\textsuperscript{8,17}

EULAR/ERA-EDTA and KDIGO guidelines recommend \textit{early reduction in proteinuria over first year} of treatment \textsuperscript{8,18}

\textit{ERA-EDTA: European Renal Association-European Dialysis and Transplant Association; EULAR: European League Against Rheumatism; SLE: systemic lupus erythematosus.}
REFERENCES


