

Lupus Nephritis

Practical bedside approach • Adults

01 RECOGNISE KIDNEY INVOLVEMENT

- Lupus nephritis (LN) is **immune-mediated kidney involvement in systemic lupus erythematosus (SLE)**.
- Presentation: proteinuria, haematuria, nephrotic/nephritic syndrome or rapidly progressive kidney dysfunction.
- Screen patients with SLE regularly:** blood pressure, creatinine/eGFR, urinalysis, urine sediment and quantified proteinuria. Symptoms may be absent.

02 INVESTIGATE AND CONSIDER BIOPSY

- Quantify proteinuria using **urine protein-to-creatinine ratio (PCR)** or a 24-hour collection. Check albumin, full blood count, C3/C4 and anti-dsDNA; exclude UTI.
- Low complement and rising anti-dsDNA can support activity, but **serology alone cannot diagnose or exclude active LN**.
- Consider kidney biopsy with proteinuria around **≥500 mg/day**, active sediment or otherwise unexplained impaired kidney function. Significant LN can occur with lower proteinuria.
- Biopsy identifies **class, activity and chronicity** and alternative lesions, including thrombotic microangiopathy; these findings guide treatment.

03 CHOOSE TREATMENT ACCORDING TO CLASS

- Class I/II:** kidney-specific immunosuppression is usually unnecessary; treat extrarenal SLE. Nephrotic syndrome may reflect lupus podocytopathy.
- Active class III/IV, with or without class V:** use glucocorticoids plus mycophenolic acid therapy or low-dose IV cyclophosphamide; taper glucocorticoids to minimise toxicity.
- Combination options include **belimumab + mycophenolate or low-dose cyclophosphamide**, or **mycophenolate + a calcineurin inhibitor** (e.g. voclosporin/tacrolimus) when kidney function permits.
- Pure class V:** use supportive therapy; nephrotic-range proteinuria or complications usually warrants glucocorticoids plus another immunosuppressive agent.
- Maintenance:** mycophenolate is generally preferred; azathioprine is an alternative, including when planning pregnancy. Initial plus maintenance therapy for proliferative LN usually lasts **at least 36 months**.

04 SUPPORTIVE CARE AND SAFETY

- Hydroxychloroquine** is recommended in SLE/LN unless contraindicated; adjust as needed for kidney function and arrange retinal screening.
- Control BP and proteinuria with an ACE inhibitor or ARB when appropriate. Restrict sodium, manage oedema and cardiovascular risk, and avoid NSAIDs.
- Review vaccination, infection screening and Pneumocystis prophylaxis. Monitor blood counts, organ function and drug toxicity.
- Discuss contraception, fertility and pregnancy planning. **Mycophenolate is teratogenic; cyclophosphamide is gonadotoxic**. Plan pregnancy during stable remission with specialist review.

05 MONITOR RESPONSE AND REASSESS

- Follow **proteinuria, creatinine/eGFR, urine sediment, BP, C3/C4 and anti-dsDNA**; monitor frequently during active disease.
- Complete renal response generally means **PCR <0.5 g/g with stable or improved kidney function**, usually assessed within 6-12 months; some patients need longer.
- Poor response: check adherence, dosing, infection and chronic damage. Consider repeat biopsy for persistent activity or an uncertain flare.
- Rapid creatinine rise, oliguria, severe hypertension or suspected pulmonary haemorrhage requires urgent specialist assessment.**

KEY MESSAGE

Biopsy guides treatment; proteinuria and kidney function guide follow-up. Combine disease-specific immunosuppression with kidney protection and careful toxicity monitoring.

REFERENCE

KDIGO 2024 Clinical Practice Guideline for the Management of Lupus Nephritis. Kidney Int. 2024;105(Suppl):S1-S69. kdigo.org/guidelines/lupus-nephritis/.