Specialty and Phenotype Patterns in Biologic- and Calcineurin Inhibitor (CNI)-Based Combination Therapy for Lupus Nephritis

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BACKGROUND & OBJECTIVE

Contemporary lupus nephritis (LN) guidance supports add-on biologic or calcineurin inhibitor (CNI) therapy with background mycophenolate mofetil (MMF) or cyclophosphamide (CYC), yet real-world adoption and patient selection across specialties remain inconsistent.

METHODS

An analysis was conducted of 1,074 non-dialysis adult LN charts from US nephrologists (522 charts; 89 physicians) and rheumatologists (552 charts; 111 physicians), collected between September 16 and October 13, 2025. Patients had Class III/IV (+/-V) or pure Class V LN and an eGFR ≥15.

RESULTS

Biologic/CNI-containing MMF/CYC combinations were used in 50% of rheumatology and 36% of nephrology patients. The specialty gap was driven mainly by biologic-containing regimens: MMF/CYC plus biologic +/- glucocorticoids was used in 33% of rheumatology and 21% of nephrology charts. CNI-only combinations were slightly more common in nephrology (13% vs 10%), while concomitant biologic and CNI regimens were uncommon but more frequent in rheumatology (7% vs 2%) (FIGURE 1).

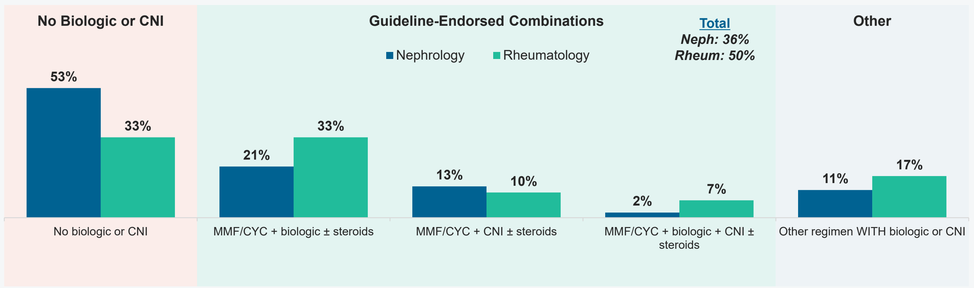
Across specialties, guideline-endorsed combination use was lowest in Class III LN (24% nephrology; 41% rheumatology) and highest in membranous (Class V) phenotypes (39%-45% and 49%-55%, respectively). CNI-containing regimen use peaked in Pure Class V disease (24% and 23%) (FIGURE 2).

Median proteinuria at LN diagnosis was higher for CNI combinations (2.8g/g) than biologic combinations (2.0g/g). Despite higher proteinuria at treatment initiation among voclosporin-treated patients, most-recent proteinuria levels were comparable between voclosporin and belimumab patients (FIGURE 3).

FIGURE 1

Immunosuppressant Treatment Combinations

% of patients

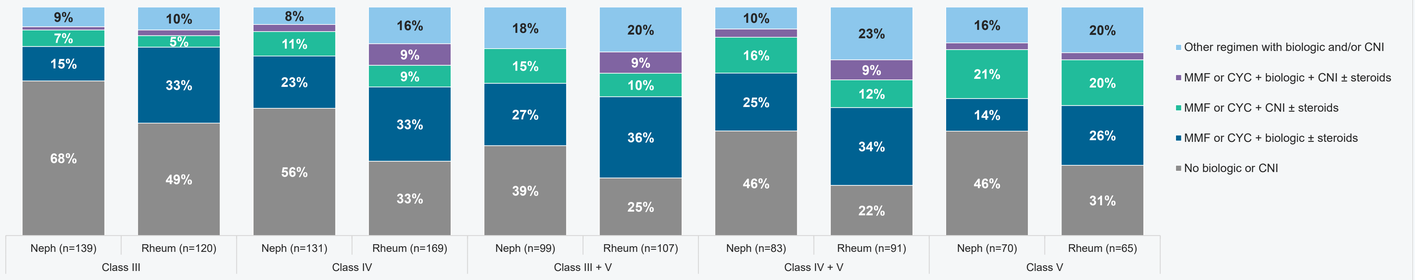


Source: Patient Chart Dynamix™: Lupus Nephritis (US), 2025; Neph n=522, Rheum n=552.

FIGURE 2

Immunosuppressant Treatment Combinations by ISN Classification

% of patients

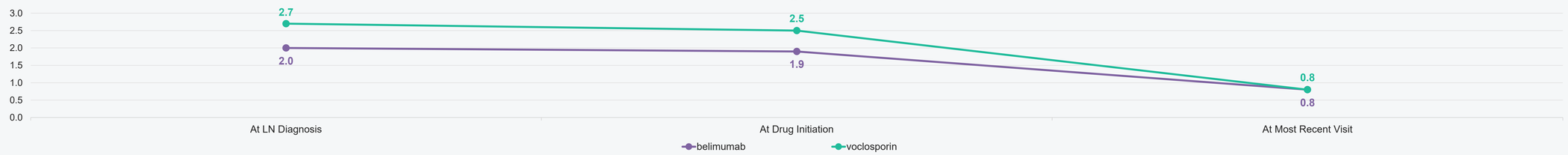


Source: Patient Chart Dynamix™: Lupus Nephritis (US), 2025; n shown per bar.

FIGURE 3

Proteinuria Levels Over Time – Benlysta and Lupkynis Patients

Median UPCR levels (grams)



Source: Patient Chart Dynamix™: Lupus Nephritis (US), 2025.

CONCLUSIONS

Rheumatologists demonstrated greater adoption of biologic/CNI-containing LN combination regimens than nephrologists, largely reflecting more frequent biologic use. CNIs were not the dominant combination strategy overall but appeared preferentially used in higher-proteinuria and membranous-pattern disease, suggesting real-world selection of biologics as the default add-on and CNIs for proteinuria/membranous phenotypes.

POSTER DETAILS

ACKNOWLEDGMENTS
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DISCLOSURES
Tucker Hurtado, Sawyer May, Lynn Price and Ryan Rex are employees of Spherix Global Insights, an independent market intelligence firm and have received no industry funding to conduct and report on this study.

REFERENCES
Spherix Global Insights. *Patient Chart Dynamix™: Lupus Nephritis (US), 2025.* Proprietary market research study.

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