Archives of Men's Health. 2024; 8(1): e13

OPEN ACCESS

CASE REPORT

Lupus Nephritis in Men: A Series of 25 Cases

Samoudi Jamila[1,2], Hmaidouch Nabil[1,2]*, Ouzeddoun Nama[1,2], Benamar Loubna[1,2], Bouattar Tarik[1,2]

1. Ibn Sina University Hospital Center, Department of Nephrology, Dialysis and Kidney Transplantation, Rabat, Morocco.
2. Mohammed V University of Rabat, Faculty of Medicine and Pharmacy of Rabat, Rabat, Morocco.

Received: October 2024; Accepted: November 2024; Published online: December 2024

Abstract: **Introduction:** Systemic lupus erythematosus (SLE) is an autoimmune disease more common in women than in men. This study analyzes the clinical, biological, immunological, and evolutionary features of lupus nephritis in men. **Methods:** This study involved 25 male patients diagnosed with lupus nephritis between 2020 and 2024, selected from 90 lupus patients. All met the ACR or SLICC criteria and had kidney damage. **Results:** The average age at diagnosis was 34.2 years (range: 16–51). Six patients were hypertensive, none were diabetic. Renal failure was observed in 15 patients, hematuria in 12, nephrotic syndrome in 15, and non-nephrotic proteinuria in 8. Most patients had lupus membranoproliferative glomerulonephritis (Class IV, 19 patients), followed by extra-membranous glomerulonephritis (Class V, 4 patients). Extra-renal involvement included hematological disorders (18 patients) and joint issues (16 patients), with two patients having antiphospholipid syndrome. For treatment, 21 patients received intravenous methylprednisolone and cyclophosphamide, while 4 received oral mycophenolate mofetil (MMF). Maintenance therapy was with MMF (4 patients) or azathioprine (15 patients). After two years, 8 patients achieved complete remission, 2 had partial remission, 5 relapsed, and 4 progressed to chronic kidney disease, including 2 with end-stage renal disease. **Conclusion:** Lupus nephritis generally has a favorable course, although relapses and chronic kidney disease are observed. Personalized management is crucial for improving long-term outcomes.

Keywords: Lupus nephritis, renal failure, immunosuppression, chronic kidney disease

Cite this article as: Jamila S, Nabil N, Nama O. Lupus Nephritis in Men: A Series of 25 Cases. Archives of Men's Health. 2024; 8(1): e13.

1. Introduction

Lupus nephritis is a common and serious complication of systemic lupus erythematosus (SLE), with often more severe forms observed in male patients. Although men are less frequently affected by SLE, when they do develop the disease, the renal involvement tends to be more aggressive and is associated with a less favorable prognosis (1).

This study aims to describe the clinical and biological characteristics, analyze the prevalence, describe the histological findings, and evaluate the therapeutic outcomes and prognosis of male patients with systemic lupus erythematosus (SLE).

* **Corresponding Author:** Hmaidouch Nabil; Address: Ibn Sina University Hospital Center, Department of Nephrology, Dialysis and Kidney Transplantation, Mohammed V University of Rabat, Faculty of Medicine and Pharmacy of Rabat, Rabat, Morocco. Email: hmaidouchn@gmail.com.

2. Methods

This is a retrospective descriptive study involving 25 male patients diagnosed with systemic lupus erythematosus (SLE) who were followed in the nephrology department of Ibn Sina Hospital in Rabat between 2019 and 2024. All patients met the revised criteria of the American Rheumatism Association for SLE.

We collected demographic data, including age, sex, and patient comorbidities.

We documented the type of renal involvement, based on urinary sediment analysis and urine culture, as well as the presence of nephrotic syndrome. We also investigated extrarenal involvement.

Renal involvement in SLE was defined by the presence of active urinary sediment: hematuria and/or leukocyturia, and/or proteinuria greater than 0.5 g/g of urinary creatinine.

We assessed the presence of lupus-sensitive and/or specific antibodies: antinuclear antibodies (ANA), anti-DNA antibodies, anti-Sm antibodies, and antiphospholipid antibodies (APL: anticardiolipin, beta-2-glycoprotein I antibodies), when available.

The diagnosis of lupus was based on SLICC criteria: 4 SLICC criteria, including at least one clinical and one immunological, or histological findings of lupus glomerulonephritis with positive ANA or anti-DNA antibodies.
We reviewed data from renal biopsies, including the number and types of lupus nephritis at each biopsy.
Finally, we analyzed the therapeutic management and followed up on the patients' outcomes.

3. Results

3.1. Demographic Characteristics

Over 5 years, 90 patients were diagnosed and followed for lupus nephritis in the nephrology department, 25 of whom were male, representing 28% of all lupus patients.
The mean age at diagnosis was 34.2 ± 9.98 years, ranging from 16 to 51 years. Six patients were hypertensive, and none were diabetic (Table 1).
Renal involvement presented as microscopic hematuria in 12 patients, non-nephrotic proteinuria in 8 patients, and nephrotic syndrome in 15 patients. Renal insufficiency was found in 15 patients.
Regarding extrarenal manifestations, cutaneous involvement is presented as acute cutaneous lupus in 8 patients, chronic cutaneous lupus in 3 patients, and non-scarring alopecia in 6 patients. Polyarthralgia was observed in 16 patients; 5 patients developed pleural and/or pericardial effusions.
Hematological, hemolytic anemia was present in 11 patients, leukopenia in 14 patients, and thrombocytopenia in 6 patients. No patients developed neuropsychiatric lupus.
Immunologically, complement consumption was observed in 22 patients, anti-DNA antibodies in 22 patients, antinuclear antibodies in 22 patients, anti-Sm antibodies in 6 patients, and antiphospholipid antibodies in 2 patients.

3.2. Renal biopsy

All patients underwent a renal biopsy. Class IV lupus membranoproliferative glomerulonephritis was found in 19 patients, membranous glomerulonephritis in 4 patients, while Class II lupus nephritis and combined lupus glomerulonephritis (Class IV and Class V) were each found in 1 patient. (Figure 1)

3.3. Therapeutic Management

Following the results of the renal biopsy, treatment for lupus nephritis was guided by the histological classification as well as the activity and chronicity of the lesions. It consisted of two phases: induction therapy and maintenance therapy, in accordance with the protocols of our department. (Figure 2).
In cases of class IV lupus membranoproliferative glomerulonephritis (MPGN) and combined class IV and V forms, monthly intravenous pulses of cyclophosphamide were administered to 20 patients, with dosage adjusted according to renal function. Maintenance therapy was continued with mycophenolate mofetil (MMF) in 4 patients and azathioprine in 15 patients. One patient was lost to follow-up and did not receive maintenance treatment.
For the case of class V lupus MPGN, the patient received a pulse of Solumedrol followed by oral corticosteroid therapy.

3.4. Outcome

Complete remission is defined as follows: inactive urinary sediment, proteinuria below 0.5 g/g, and normal renal function. Partial remission is defined as a reduction of more than 50% in proteinuria. Relapse is defined by the recurrence of active urinary sediment and/or the emergence of proteinuria greater than 0.5 g/g. (Figure 3)
Complete remission was observed in 8 patients, partial remission in 2 patients, and relapse in 5 patients. Five patients were lost to follow-up, four progressed to chronic kidney disease, and one patient died due to septic shock.
There was no observed association between the histological type of lupus nephritis and patient outcomes.

4. Discussion

Our study highlights a significant clinical particularity of systemic lupus erythematosus (SLE) in men, especially when it progresses to lupus nephritis (LN). Although SLE is predominantly a female disease, renal involvement in men tends to be more severe, with frequent diagnostic delays and a generally less favorable outcome. These findings are consistent with several recent studies that report a more aggressive course of lupus nephritis in male patients (2,3).
In our cohort of 25 male patients, accounting for 28% of all LN cases, the mean age at diagnosis was 34.2 years. This aligns with the findings of Wang et al. (4) and Tktonidou et al. (5), who reported an average age of 35 to 38 years among men with lupus nephritis. Similar mean ages have been reported in African studies, such as that of Hermine Danielle Fouda Menye Ebana et al. in Cameroon(6) (32.5 years) and Brijlal et al. in South Africa (35 years) (7) . These data confirm that SLE and its renal complications primarily affect young adults, which has significant socio-economic implications, particularly in low-resource settings (8,9). The diagnostic delay may be partly explained by the perception of lupus as a predominantly female disease, which could reduce clinical suspicion in men (2,10,11).
The proportion of men affected by lupus nephritis in our study (28%) is higher than typically reported in the literature, where men account for 10–20% of LN cases (12, 13). This difference may reflect ethnic factors or potential recruitment bias (14). Furthermore, studies such as that by Andrade et al. (2021) suggest that the prevalence of lupus in men may be

underestimated due to poorer access to healthcare or later diagnoses (15–17).

Renal involvement in our cohort was particularly severe, with 60% of patients presenting with nephrotic syndrome and 60% developing renal failure. These rates are higher than those reported in other studies, which estimate that severe renal involvement affects around 40% of male lupus patients (18,19). Histological analysis revealed a predominance of diffuse proliferative glomerulonephritis (class IV) in 76% of patients, in line with findings by Fava et al. (20), who also observed that proliferative forms are more common and more severe in men. Extra-renal manifestations were also well documented in our study, with frequent skin, joint, and hematologic involvement. Leukopenia and hemolytic anemia were found in nearly half the patients—similar to findings in international studies that report a high prevalence of hematologic manifestations in men with lupus (21,22). Moreover, no cases of neuropsychiatric lupus were found, which may reflect underdiagnosis, as some studies estimate that neuro-lupus affects 5–10% of male patients (23).

From a therapeutic standpoint, our study shows management strategies consistent with international recommendations, including the use of intravenous cyclophosphamide for induction, followed by maintenance therapy with mycophenolate mofetil or azathioprine. However, the fact that five patients were lost to follow-up raises concerns about treatment adherence and long-term care, a problem well-documented in the study by Pons-Estel et al., which noted higher dropout rates among male patients (24,25).

Patient outcomes showed a complete remission rate of 32%, which is slightly lower than the 40–50% remission rates reported in female cohorts (26,27). Additionally, 16% of patients progressed to chronic kidney disease, consistent with previous studies indicating that men with lupus nephritis are twice as likely as women to progress to end-stage renal disease (28,29). These findings raise several important questions. Why do men tend to develop more severe lupus nephritis? Emerging hypotheses point to hormonal differences, specifically, the protective effects of estrogen in women and the potentially aggravating role of testosterone in men (30). Genetic studies, such as that by Langefeld et al. (31), also suggest that X-chromosome-related factors may influence immune responses and lupus progression (32,33).

Another key issue is treatment adherence. The significant number of patients lost to follow-up in our cohort is concerning and reflects a broader issue in managing male lupus patients. Recent initiatives, such as those described by Barber et al. (25), propose that therapeutic education and personalized follow-up could improve adherence and reduce the risk of progression to renal failure.

Finally, the search for predictive biomarkers of severe lupus nephritis in men appears promising. Studies such as that of Parodis et al. (26), suggest that complement levels, genetic signatures, and urinary biomarkers could help better stratify risk and tailor treatments to individual patient profiles.

In conclusion, our study offers valuable insights into the presentation of lupus nephritis in male patients. Further prospective studies comparing male and female lupus nephritis patients, including long-term follow-up and prognostic factor analysis, would be particularly informative.

5. List of abbreviations

SLE: Systemic Lupus Erythematosus; LN: Lupus Nephritis; ANA: Antinuclear Antibodies; Anti-DNA: Anti-double-stranded DNA Antibodies; Anti-Sm: Anti-Smith Antibodies; APL: Antiphospholipid Antibodies; ACR: American College of Rheumatology; SLICC: Systemic Lupus International Collaborating Clinics; MPGN: Membranoproliferative Glomerulonephritis; MMF: Mycophenolate Mofetil; CKD: Chronic Kidney Disease; IV: Intravenous; ESRD: End-Stage Renal Disease

6. Conclusion

The results of this study show that lupus nephritis in men presents with more severe characteristics, including a higher frequency of proliferative histological forms and a faster progression to renal failure. Despite appropriate therapeutic management, the prognosis remains guarded for some patients. These findings highlight the importance of early detection and close monitoring to improve long-term outcomes in men with lupus nephritis.

7. Appendix

7.1. Acknowledgment

We would like to express our sincere gratitude to the staff of the Nephrology Department at Ibn Sina Hospital in Rabat for their support and collaboration throughout this study. We also thank all the patients who participated in this research.

7.2. Conflict of Interest

The authors declare that there is no conflict of interest regarding the publication of this paper.

7.3. Funding and Support

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

7.4. Authors' Contributions

Jamila Samoudi: conceptualization, methodology, data collection, and drafting of the original manuscript. Nabil Hmaidouch: data analysis, literature review, and critical editing of the manuscript. Naima Ouzeddoun: preparation of

figures and tables, and manuscript formatting. Loubna Benamar: supervision and validation of the study. Tarik Bouattar: project administration, final review, and approval of the manuscript. All authors have read and approved the final version of the manuscript.

7.5. Ethical Approval

This retrospective study did not require formal ethical approval, in accordance with the institutional policies of Ibn Sina Hospital. Oral informed consent was obtained from all participants for the use of anonymized clinical data in research and publication.

7.6. Data Availability

The datasets generated and analyzed during the current study are available from the corresponding author upon reasonable request.

References

1. Benhmida M, Chaabouni Y, Kammoun K, Yaich S, Kharrat M, Jarraya F, et al. Néphropathie lupique chez l'homme. À propos de 20 cas. Néphrologie Thérapeutique. 2011 Sep 1;7(5):377–8.
2. Cheikh S, Kharrat A, Soldi C, Khayat SS, Mtioui N, Medkouri G, et al. La néphropathie lupique : quelle particularité chez l'homme ? Rev Médecine Interne. 2023 Jun 1;44:A254.
3. Barhoumi H, Chaabouni Y, Hchicha J, Kammoun K, Kharrat. M. Néphropathie lupique chez l'homme: à propos de 24 cas. 2017.
4. Wang H, Ren Y le, Chang J, Gu L, Sun LY. A Systematic Review and Meta-analysis of Prevalence of Biopsy-Proven Lupus Nephritis. Arch Rheumatol. 2018 Mar;33(1):17–25.
5. Tektonidou MG, Andreoli L, Limper M, Amoura Z, Cervera R, Costedoat-Chalumeau N, et al. EULAR recommendations for the management of antiphospholipid syndrome in adults. Ann Rheum Dis. 2019 Oct 1;78(10):1296–304.
6. Ebana HDFM, Mahamat M, Lekpa FK, Jemmy CK, Ashuntantang G, Halle MP. [Clinical profile and survival of patients with lupus nephritis in the department of nephrology in Cameroon: a single-center study]. Pan Afr Med J. 2022;41:205.
7. Brijlal U, Bates WD, Moosa MR. Lupus nephritis in the Western Cape, a high prevalence area: an experience over three decades. Lupus. 2017 Oct 1;26(11):1228–34.
8. Williams JN, Drenkard C, Lim SS. The impact of social determinants of health on the presentation, management and outcomes of systemic lupus erythematosus. Rheumatol Oxf Engl. 2023 Mar 29;62(Suppl 1):i10–4.
9. Buie J, McMillan E, Kirby J, Cardenas LA, Eftekhari S, Feldman CH, et al. Disparities in Lupus and the Role of Social Determinants of Health: Current State of Knowledge and Directions for Future Research. ACR Open Rheumatol. 2023 Aug 2;5(9):454–64.
10. Izidbih Y, Snoussi M, Damak C, Frikha F, Marzouk S, Kammoun K, et al. Particularités du lupus érythémateux systémique masculin. NÃ©phrologie ThÃ©rapeutique. 2022 Jan 23;16:288–320.
11. David C, Arango-Franco CA, Badonyi M, Fouchet J, Rice GI, Didry-Barca B, et al. Gain-of-function human UNC93B1 variants cause systemic lupus erythematosus and chilblain lupus. J Exp Med. 2024 Aug 5;221(8):e20232066.
12. Petri M. Pregnancy and Systemic Lupus Erythematosus. Best Pract Res Clin Obstet Gynaecol. 2020 Apr 1;64:24–30.
13. Cervera R, Doria A, Amoura Z, Khamashta M, Schneider M, Guillemin F, et al. Patterns of systemic lupus erythematosus expression in Europe. Autoimmun Rev. 2014 Jun 1;13(6):621–9.
14. Arnaud L. Épidémiologie du lupus systémique : des approches traditionnelles aux méga-données. Bull Académie Natl Médecine. 2022 Jan 1;206(1):17–22.
15. Andrade RM, Alarcón GS, Fernández M, Apte M, Vilá LM, Reveille JD. Accelerated damage accrual among men with systemic lupus erythematosus: XLIV. Results from a multiethnic US cohort. Arthritis Rheum. 2007;56(2):622–30.
16. Duarte-García A, Hocaoglu M, Valenzuela-Almada M, Osei-Onomah SA, Dabit JY, Sanchez-Rodriguez A, et al. Rising incidence and prevalence of systemic lupus erythematosus: a population-based study over four decades. Ann Rheum Dis. 2022 Sep 1;81(9):1260–6.
17. Izmirly PM, Parton H, Wang L, McCune WJ, Lim SS, Drenkard C, et al. Prevalence of Systemic Lupus Erythematosus in the United States: Estimates From a Meta-Analysis of the Centers for Disease Control and Prevention National Lupus Registries. Arthritis Rheumatol Hoboken NJ. 2021 Jun;73(6):991–6.
18. Perge B, Papp G, Bói B, Markóth C, Bidiga L, Farmasi N, et al. Prognostic Factors of the Progression of Chronic Kidney Disease and the Development of End-Stage Renal Disease in Patients with Lupus Nephritis: A Retrospective Cohort Study. J Clin Med. 2025 Jan;14(3):665.
19. Pons-Estel G, Aspey L, Bao G, Pons-Estel B, Wojdyla D, Saurit V, et al. Early discoid lupus erythematosus protects against renal disease in patients with systemic lupus erythematosus: longitudinal data from a large Latin American cohort. Lupus. 2016 May 26;26:73–83.
20. Fava A, Fenaroli P, Rosenberg A, Bagnasco S, Li J, Monroy-Trujillo J, et al. History of proliferative glomerulonephritis predicts end stage kidney disease in pure

membranous lupus nephritis. Rheumatol Oxf Engl. 2021 Oct 19;61(6):2483–93.
21. Bashal F. Hematological Disorders in Patients with Systemic Lupus Erythematosus.
22. Velo-García A, Castro SG, Isenberg DA. The diagnosis and management of the haematologic manifestations of lupus. J Autoimmun. 2016 Nov;74:139–60.
23. Bortoluzzi A, Scirè CA, Govoni M. Attribution of Neuropsychiatric Manifestations to Systemic Lupus Erythematosus. Front Med. 2018;5:68.
24. Pons-Estel GJ, Alarcón GS, Scofield L, Reinlib L, Cooper GS. Understanding the epidemiology and progression of systemic lupus erythematosus. Semin Arthritis Rheum. 2010 Feb;39(4):257–68.
25. Barber MRW, Drenkard C, Falasinnu T, Hoi A, Mak A, Kow NY, et al. Global epidemiology of systemic lupus erythematosus. Nat Rev Rheumatol. 2021 Sep;17(9):515–32.
26. Parodis I, Lindblom J, Barturen G, Ortega-Castro R, Cervera R, Pers JO, et al. Molecular characterisation of lupus low disease activity state (LLDAS) and DORIS remission by whole-blood transcriptome-based pathways in a pan-European systemic lupus erythematosus cohort. Ann Rheum Dis. 2024 Jul 1;83(7):889–900.
27. Yu C, Li P, Dang X, Zhang X, Mao Y, Chen X. Lupus nephritis: new progress in diagnosis and treatment. J Autoimmun. 2022 Oct;132:102871.
28. Banos A, Bertsias G. Flares in Lupus Nephritis: Risk Factors and Strategies for Their Prevention. Curr Rheumatol Rep. 2023;25(10):183–91.
29. Rojas-Rivera JE, García-Carro C, Ávila AI, Espino M, Espinosa M, Fernández-Juárez G, et al. Diagnosis and treatment of lupus nephritis: a summary of the Consensus Document of the Spanish Group for the Study of Glomerular Diseases (GLOSEN). Clin Kidney J. 2023 Mar 22;16(9):1384–402.
30. Sachdeva R, Pal R. The influence of reproductive hormones on systemic lupus erythematosus. Explor Immunol. 2022 Jun 7;2(3):351–62.
31. Langefeld CD, Ainsworth HC, Cunninghame Graham DS, Kelly JA, Comeau ME, Marion MC, et al. Transancestral mapping and genetic load in systemic lupus erythematosus. Nat Commun. 2017 Jul 17;8:16021.
32. Kavrul Kayaalp G, Casares-Marfil D, Şahin S, Kasapçopur Ö, Sözeri B, Aktay Ayaz N, et al. Rare Turner syndrome and lupus coexistence with insights from DNA methylation patterns. Clin Immunol. 2024 Sep 1;266:110310.
33. Laurynenka V, Harley JB. The 330 risk loci known for systemic lupus erythematosus (SLE): a review. Front Lupus 2024.

Table 1: Demographic Characteristics of the Study Population

Demographic Characteristics	
Age (years)	34.2 +/- 9.98
Comorbidities	
Diabetes	0
Arterial Hypertension	6 (24%)
Ischemic Heart Disease	3 (12%)
Renal involvement	
Hematuria	12 (48%)
Non-glomerular proteinuria	8 (32%)
Nephrotic syndrome	15 (60%)
Skin involvement	10 (40%)
Articular involvement	16 (60%)
Serositis (Pericarditis/Pleurisy)	5 (20%)
Neurological involvement	0
Hematological involvement	18 (76%)
Hemolytic anemia	11 (44%)
Leukopenia	11 (44%)
Thrombocytopenia	6 (24%)
Immunological abnormalities	
ANA (Antinuclear Antibodies)	22 (88%)
Anti-DNA antibodies	22 (88%)
Anti-Sm antibodies	6 (24%)
Antiphospholipid antibodies	2 (8%)
Decreased complement C3 and/or C4 levels	22 (88%)

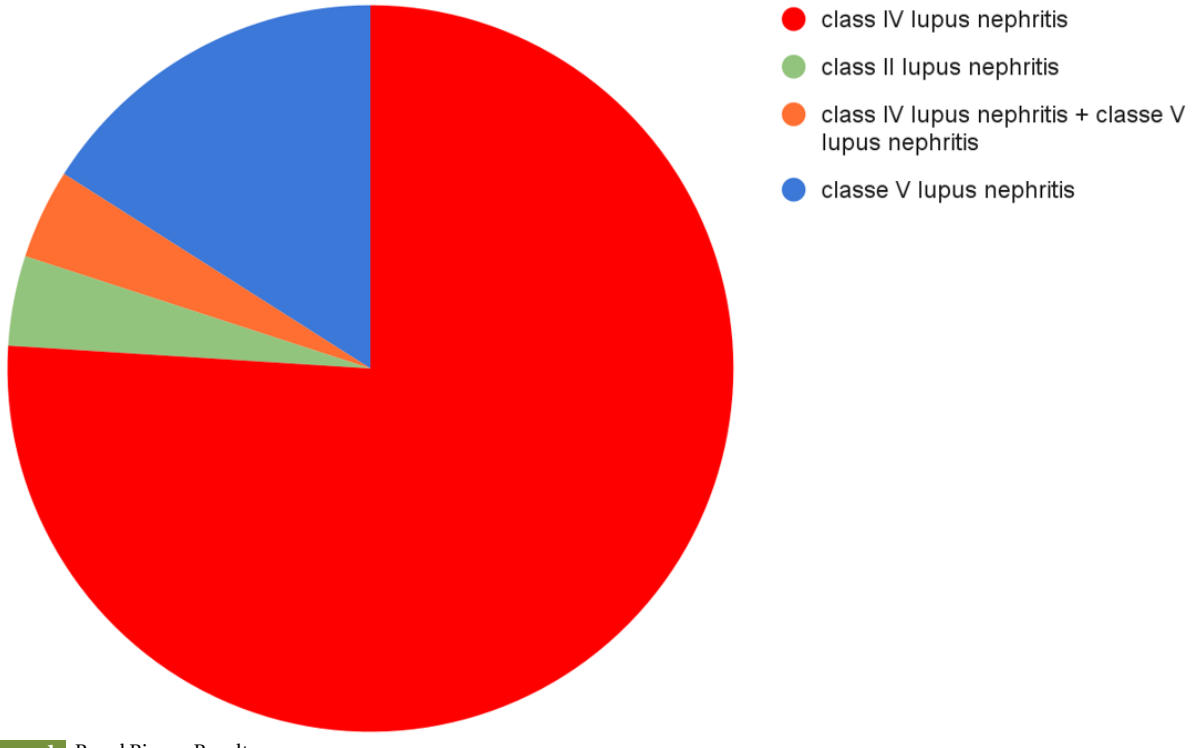

Figure 1: Renal Biopsy Results

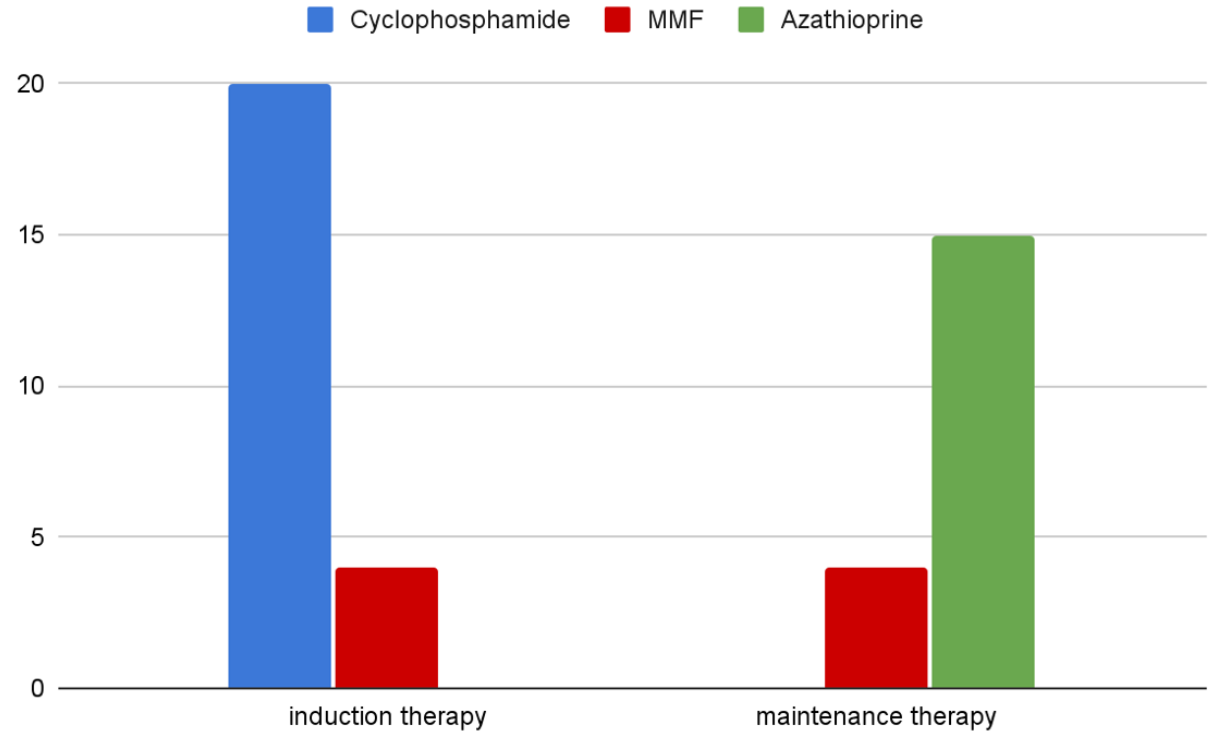

Figure 2: Therapeutic Management of Lupus Nephritis

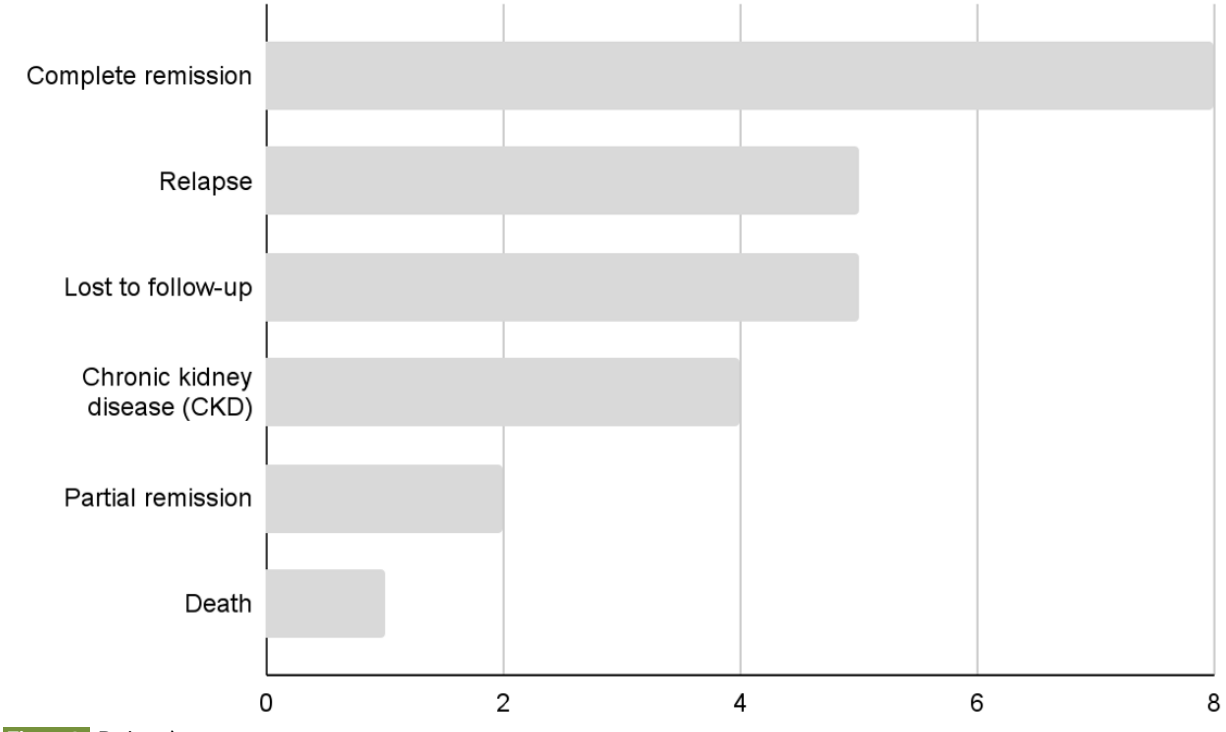

Figure 3: Patients' outcomes