INTRODUCTION / AIM
• LN is a serious and common manifestation of SLE associated with considerable morbidities, including an increased risk of ESKD.
• Many patients do not achieve sustained remission despite treatment, leading to adverse disease outcomes.
• This literature review aims to summarize evidence on the long-term outcomes, burden of comorbidities, and RW effectiveness of therapy in European patients with LN.

METHODS
• A targeted literature review was conducted to identify studies on disease burden, treatment outcomes, treatment patterns, and guidelines in adult and juvenile patients with diagnosed LN.
• Separate search strategies were developed for the databases to identify relevant peer-reviewed articles published in English between March 2012 - March 2022, and reference abstracts indexed in Embase since 2019.
• All records were screened by a single reviewer according to pre-specified inclusion and exclusion criteria.

RESULTS (CONT'D)
COMORBIDITIES & MORTALITY
• Among patients with SLE, over one-third developed LN, with the majority developing LN within 5 years of their SLE diagnosis.1,14
• Adults with LN frequently suffered from serious infection (19-35%),2,10 CKD or ESKD (6-22%),1,4-5 and CVD (26%),16.
• LN was associated with a higher mortality risk compared to SLE or its manifestations other than LN (p<0.001),17 and infections (8-32%), CVD (22-58%), or malignancies (5-27%) were the most common causes of death.16,17
• CKD/ESKD also contributed to poor survival15-17 – patients with ESKD had 3-times higher risk of death compared to those with LN only (p<0.001; Figure 2).

TREATMENT RESPONSE & RELAPSES
• Between 30-86% of patients with LN achieved CRR within 1 year of starting SOC therapy.2,4-7,11,14,18
• For patients with refractory LN, 29-64% of patients treated with RTX achieved CRR after 1 year,19,20 while patients with active LN despite SOC treatment achieved BEL-CRR after 1 year of treatment.21
• Despite initial response to current therapies, 20-35% of patients experienced a renal relapse flare while on maintenance treatments, and continuous treatment with BEL was needed to maintain CRR over a 5-year period, further highlighting the inadequacies of existing therapies (Figure 3). A
• Another study noted significantly increased risk of proteinuric flares with azathioprine compared to other maintenance therapies (p<0.01).22

IMPACT OF TREATMENT RESPONSE ON RENAL OUTCOMES
• Patients who were non-responders after 1 year had a significantly increased risk of mortality and RW compared to responders (p<0.004).19,23
• Patients achieving CRR had significantly longer CKD-free survival compared to non-responders at 15 years (95% vs 55%, p<0.0001), further highlighting the value of achieving response in terms of long-term renal outcomes (Figure 4).13

Odds of mortality among patients with LN and ESKD vs. patients with LN onlya

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<tr>
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<th>OR (95% CI)</th>
<th>p-value</th>
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<tbody>
<tr>
<td>Unadjusted</td>
<td>9.28</td>
<td>&lt;0.001</td>
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<tr>
<td>Adjusted for age, sex, ethnicity</td>
<td>3.88 (95% CI 2.09, 7.22)</td>
<td>&lt;0.001</td>
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5- and 15-year sustained remission rate

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<th>Rate of renal relapse / flare after remission</th>
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<tr>
<td>5 Year</td>
<td>39%</td>
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<tr>
<td>10 Year</td>
<td>35%</td>
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<td>15 Year</td>
<td>32%</td>
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CONCLUSIONS
• Uncontrolled LN is associated with poor long-term outcomes, such as CKD and ESKD or death, and significant comorbidities, such as severe infections and CVDs.
• Few patients achieve and maintain remission on current SOC therapies, and a notable proportion of patients experience terminal renal relapse despite initial response to therapy.
• Achieving CRR may reduce the risk of long-term complications of LN, thus there is a need for effective therapies that provide sustained remission.

AUTHOR DISCLOSURES

REFERENCES

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UNMET NEEDS AND POOR LONG-TERM OUTCOMES IN EUROPEAN PATIENTS WITH LUPUS NEPHRITIS

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