

Comparison of different definitions of remission in children with lupus nephritis

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Background: JSLE is a severe and lifelong systemic disease where nephritis (LN) significantly affect the long term prognosis. Achieving and maintaining renal remission is the goal of treatments. We studied the rate of complete and partial remission of lupus nephritis, according to different definitions, in an international cohort of children.

Methods: 248 children with biopsy proven LN class \geq III, diagnosed in the last 10 years in 23 international centers, were studied up to 24 months of follow-up. Children were treated according to local protocols. Seven definitions of remission from published studies and international guidelines were applied.

Results: The mean age at diagnosis was 11 years and 4 months. 71.4% were females. The number of children in complete and partial remission varied significantly between the different definitions. At 24 month between 50% and 78.8% of the children were in complete remission (CR) according to the different criteria (Figure 1). A relatively small percentage of children, between 2.3% to 25%, achieved partial remission (PR) during the follow-up (Figure 2). Using 3 of the 7 definitions, we found no difference in terms of gender and age of children entering remission, while patients with East Asian ethnicity achieved remission more often than other ethnic groups ($p < 0.05$) (Figure 3). Also children treated in high income countries showed a higher percentage of complete remission ($p < 0.05$) (Figure 4).

Figure 1. Patients in CR

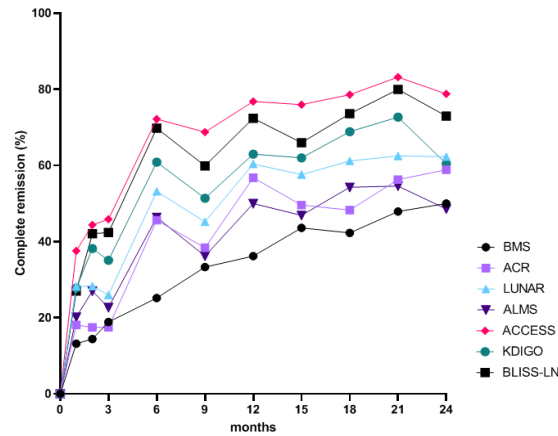


Figure 2. Patients in PR

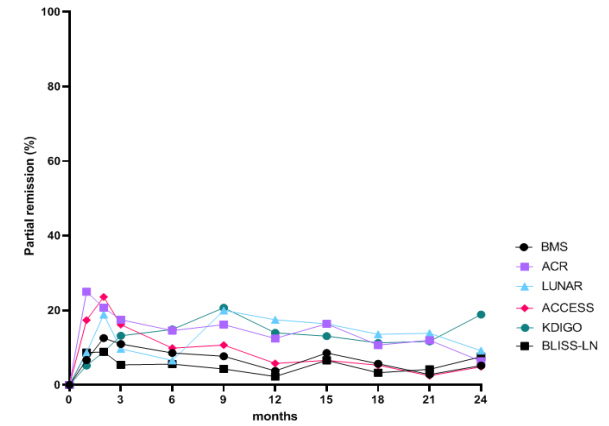


Figure 3. Patients in CR divided by ethnic groups

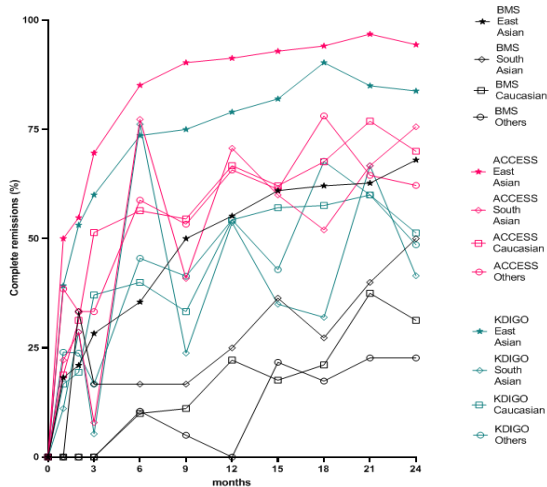
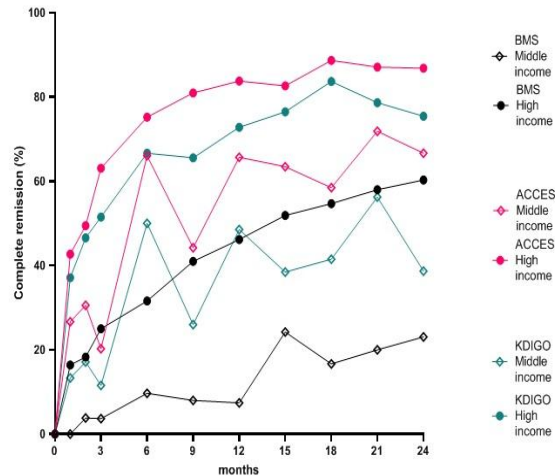


Figure 4. Patients in CR divided by high and middle income countries



Conclusion: The percentage of children with LN achieving remission varied considerably applying different definitions. Our findings open the discussion on what to consider remission also in the perspective of new possible treatments in children.