Introduction

- Better understanding of the patterns of symptom and organ involvement in patients with systemic lupus erythematosus (SLE) may facilitate individualized management and evaluation of new interventions against more specific unmet needs.
- The Adelphi Real World cross-sectional survey, Lupus Disease Specific Programme (DSP) was conducted in 2015 to describe physician- and patient-reported treatment satisfaction, and to assess functional and clinical outcomes in a large real-world cohort of patients with SLE.
- This analysis utilized the DSP data to categorize patients with SLE into different groups (clusters) according to their organ system involvement.

Objectives

- To categorize patients with SLE into clusters according to the presence of organ system type and organ system involvement.
- To describe and compare the clinical and treatment characteristics and patient-reported outcomes of each cluster.

Results

Overall study population

- Overall, 250 rheumatologists completed PRFs for 1376 patients, of whom all were included in the analyses described here: 859 of these patients completed PRFs.
- Patients were predominantly white/Caucasian and female, and had a mean (standard deviation) age of 42.1 (13.6) years.

Generation of clusters

- Based on organ system involvement at the time of the survey, four patient clusters were generated (Figure 1 and Box 1).

Demographic characteristics of patient clusters (Table 1)

- Significant differences were observed between the clusters in terms of patient ethnicity (p=0.003), with the highest proportions of black and Hispanic/Latino patients in Cluster 3.

Clinical characteristics of patient clusters

- Significant between-cluster differences were observed for physician-assessed disease severity and progression (both p<0.001), with SLE being least severe in Cluster 1 and most severe in Cluster 3 (Figure 2).

- Disease progression was highest in Cluster 3 (Figure 2), with a higher proportion of patients exhibiting variable or deteriorating disease compared with other clusters (Table 2).

Treatment history and patient-reported outcomes

- Patients in Clusters 3 and 4 had the highest number of prior treatments, treatment classes, and highest use of corticosteroids, immunosuppressants, and biologic disease modifying antirheumatic drugs (p<0.0001, p=0.003, and p<0.0001 across clusters, respectively).

Conclusions

- This analysis of international real-world cross-sectional cohort data identified distinct and potentially clinically meaningful subsets of SLE.
- A similarly high disease burden was found in Clusters 3 and 4, confirming the extensive impact of SLE regardless of the presence of renal involvement.
- Analysis of organ system involvement over time confirms that once an organ system is involved, it remains affected in patients with more severe SLE.

- Limitations included the absence of serological findings or disease activity indices for cluster formation or comparison.
- The current study utilized data from an aggregate global sample and thus it could not identify subtle differences in the management approach between health care providers. Future studies may address this topic.
- Patients were included in the study with varying lengths of time since diagnosis. As time since diagnosis differed significantly between the clusters, it is possible that differences in the clusters’ characteristics were influenced by different stages of SLE.