

33 ASSOCIATION OF THE LUPUS LOW DISEASE ACTIVITY STATE (LLDAS) WITH HEALTH RELATED QUALITY OF LIFE

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Background and Aims Systemic lupus erythematosus (SLE) is associated with significant impairment of health-related quality of life (HR-QoL). The Lupus Low Disease Activity State (LLDAS) definition has not been previously evaluated for association with patient reported outcomes. The objective of this study was to determine whether LLDAS was associated with better HR-QoL, and examine predictors of HR-QoL, in a large multiethnic, multinational cohort of SLE patients.

Methods HR-QoL was measured using the Medical Outcomes Study 36-item Short Form Health Survey (SF-36v2) in a prospective study of 1422 patients. Disease status was measured using SLE disease activity index (SLEDAI-2K), physician global assessment (PGA) and LLDAS.

Results Significant differences in SF-36 domain scores were found between patients stratified by ethnic group, education level, damage score, and with the presence of active musculoskeletal or cutaneous manifestations. In multiple linear regression analysis, Asian ethnicity ($p < 0.001$), a higher level of education ($p < 0.001$), younger age ($p < 0.001$) and shorter disease duration ($p < 0.01$) remained significantly associated with better physical component scores (PCS). Musculoskeletal disease activity ($p < 0.001$) was negatively associated with PCS, and cutaneous activity ($p = 0.04$) was negatively associated with mental component scores (MCS). Patients in LLDAS had better PCS ($p < 0.001$) and MCS ($p < 0.001$) scores and significantly better scores in multiple individual SF-36 domain scores. Disease damage was associated with worse PCS ($p < 0.001$), but not MCS scores.

Conclusions Ethnicity, education, disease damage, and specific organ involvement impacts on HR-QoL in SLE. Attainment of LLDAS is associated with better HR-QoL.

34 COMPARISON OF REMISSION AND LUPUS LOW ACTIVITY STATE AS PREDICTORS OF ORGAN DAMAGE

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Background and Aims Outcome measures that combine control of SLE activity and prednisone reduction are clinically relevant. A clinical goal in SLE is to reduce risk of long-term organ damage. We assessed whether two recently proposed disease activity outcomes were predictive of future damage.

Methods For each month of follow-up, we determined whether the patient was in Clinical Remission (as defined by the DORIS work group) or low lupus disease activity state (LLDAS) (as defined by Franklyn *et al.*). Clinical Remission was defined as a PGA < 0.5 , clinical SLEDAI = 0 and no prednisone or immunosuppressants. Clinical Remission on Treatment allowed for prednisone ≤ 5 mg/day and immunosuppressant use. LLDAS was defined as a SLEDAI ≤ 4 , PGA ≤ 1.0 , no major organ activity, and no new activity. LLDAS on treatment allowed for prednisone use ≤ 7.5 mg/d and immunosuppressants. Damage was defined using the SLICC/ACR index.

Results There were 81 118 person-months observed among 2026 patients (92% female, 53% Caucasian, 39% African-American). Table 1 shows the rates of damage, per person month, in subgroups defined by Remission or LLDAS.

Damage rates were relatively low when LLDA was achieved at least 50% of the time. These rates were similar to those experienced by patients who met a more stringent treatment restriction with Remission on Treatment at least 50% of the time.

Conclusions The equivalence of LLDAS and DORIS remission on treatment is welcome news, as LLDAS on treatment $> 50\%$ of the time is an easier goal to achieve (3 times more person-months observed in our cohort) and more realistic as a clinical trial outcome.

Abstract 34 Table 1

Percentage of Prior Months in:	Number of person-months observed	Number of months with an increase in SLICC/ACR damage	Rate of damage per 100 person months	Rate Ratios	P-values
Clinical Remission					
None	35,772	406	1.13	1.0 (Ref)	
Not none, but < 25%	14,358	102	0.71	0.60 (0.48, 0.75)	<0.0001
25% to 50%	6573	50	0.76	0.66 (0.46, 0.94)	0.023
50% to 75%	3845	27	0.70	0.63 (0.42, 0.97)	0.035
75%+	1,641	10	0.61	0.58 (0.30, 1.15)	0.12
Clinical Remission on Treatment					
None	16,491	250	1.52	1.0 (Ref)	
Not none, but < 25%	20,169	170	0.84	0.54 (0.44, 0.67)	<0.0001
25% to 50%	14,344	103	0.72	0.46 (0.36, 0.60)	<0.0001
50% to 75%	8396	54	0.64	0.43 (0.30, 0.60)	<0.0001
75%+	2,789	18	0.65	0.45 (0.27, 0.75)	0.0019
LLDAS					
None	30,366	343	1.13	1.0 (Ref)	
Not none, but < 25%	10,880	106	0.97	0.86 (0.69, 1.07)	0.18
25% to 50%	5012	40	0.80	0.70 (0.51, 0.98)	0.037
50% to 75%	8494	60	0.71	0.63 (0.48, 0.83)	
75%+	7,527	46	0.61	0.54 (0.40, 0.73)	<0.0001
LLDAS on Treatment					
None	7,656	117	1.53	1.0 (Ref)	
Not none, but < 25%	10,555	134	1.27	0.83 (0.65, 1.06)	0.14
25% to 50%	12,686	129	1.02	0.66 (0.51, 0.85)	0.0013
50% to 75%	18,151	133	0.73	0.48 (0.37, 0.61)	0.0010
75%+	13,141	82	0.62	0.40 (0.30, 0.54)	<0.0001