Table 1. Main demographic data, clinical and laboratory features in the studied group.

	SLE no aPL, n (%)	SLE APS, n (%)	SLE aPL, n (%)	P
Female sex	2075 (90.9%)	455 (88.3%)	757 (90.1%)	0.178
Age, mean±SD (yr)	47.0±15.1	48.5±14.4	45.3±14.3	<0.001
Disease duration, mean±SD (mo)	141.5±100.7	156.8±109.8	136.4±93.0	0.001
Tobacco use:				0.743
•Current	395 (16.3)	91 (18.6)	125 (16.6)	
•Former	494 (24.1)	119 (24.9)	189 (25.2)	
High blood pressure	647 (28.6)	211 (40.1)	203 (24.4)	<0.001
Dyslipidemia	664 (30.3)	216 (41.9)	221 (27.3)	<0.001
Diabetes:				0.022
•Without organ damage	97 (4.3)	29 (5.6)	25 (3)	
•With organ damage	17 (0.8)	8 (1.5)	3 (0.4)	
Cutaneous manifestations	1769 (74.4)	358 (67.4)	611 (72.7)	0.005
Joint symptoms	636 (27.8)	164 (30.9)	204 (24.3)	0.022
Respiratory manifestations	241 (10.5)	125 (23.5)	70 (8.3)	<0.001
Cardiac manifestations	379 (16.6)	159 (29.9)	125 (14.9)	<0.001
Renal manifestations	862 (37.7)	249 (46.9)	296 (35.4)	<0.001
Neuropsychiatric manifestations	655 (28.7)	235 (44.3)	238 (28.3)	<0.001
Ophthalmological manifestations	315 (13.8)	111 (20.9)	109 (12.2)	<0.001
Positive anti-DNA antibodies	1049 (46.9)	258 (50)	367 (45.1)	<0.001
Hypocomplementemia	1716 (76.7)	424 (82.6)	645 (77.9)	0.011

Conclusion: SLE-APS patients show a more severe clinical profile with higher frequency of major organ involvement and more damage accrual than SLE-aPL and SLE no aPL.

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OP0250

INFLUENTIAL FACTORS IN PROMOTING TREAT-TO-TARGET FOR SYSTEMIC LUPUS ERYTHEMATOSUS VIA EMPOWERING PATIENTS: A COHORT STUDY FROM CHINA BY SMART SYSTEM OF DISEASE MANAGEMENT (SSDM)

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Background: T2T is routine in RA, but no comparable standard has been defined for SLE. In 2015, the definition of Lupus Low Disease Activity State (LLDAS) was generated by Asia-Pacific Lupus Collaboration, and the preliminary validation demonstrated its attainment to be associated with improved outcomes in SLE. A SLEDAI-2K score lower than 4 is the main criteria for LLDAS. SSDM is an interactive mobile disease management application, including application systems for both the doctors and patients. The patients can perform self-assessment, including SLEDAI and medical records entry through the mobile application. The data is synchronized to the SSDM of authorized rheumatologists and stored in cloud database.

Objectives: To evaluate the patterns of T2T and related influential factors among SLE patients after applying SSDM in real world.

Methods: Patients were trained to master SSDM by rheumatologists in clinics. The first assessment for SLEDAI was performed as the baseline. Patients were required to perform repeated assessments after leaving the clinics.

Results: From July 2015 to Jan 2019, 1,090 SLE patients from 88 hospitals were followed up for more than 12 months through SSDM, and the results were summarized in Table 1. The ratio of T2T achievers was 52.84% (576/1,090) at the baseline and improved significantly to 68.35% (745/1,090) after a 12-month follow-up, $p < 0.01$. Among T2T achievers at the baseline, 77.08% (444/576) maintained T2T, and 22.92% (132/576) relapsed. Of patients who didn't achieve T2T at baseline, 58.56% (301/514) of them achieve T2T after 12-month follow-up.

The impact of the times of self-assessment for SLEDAI on T2T has been analyzed. The more frequent of the self-assessments being conducted by patients, the higher improvement of T2T rate will be. We performed linear regression analysis of variables in statistics and parameter estimation by least square method. The improvement of T2T rate(y) was positively correlated with times of self-assessment for SLEDAI(x) independently. The regression equation as $y = 0.0324x + 0.0226$ $R^2 = 0.7717$, $p < 0.01$. (Figure 1)

Conclusion: After proactive disease management via SSDM, the rate of T2T in SLE patients increased significantly. Patients with SLEDAI-2K≤4 score at baseline had a significantly higher retention rate. The patients who performed more self-assessments through SSDM had lower probability of relapse and higher rate of T2T maintaining and achievement. SSDM is a valuable tool for long term SLE follow-up through empowering patients.

Table1:

Baseline>Last follow-up	Number	%	SLEDAI≤4	%	SLEDAI≥5	%
SLEDAI≤4	576	52.84%	444	77.08%	132	22.92%
SLEDAI≥5	514	47.16%	301	58.56%	213	41.44%
Total	1090	100%	745	68.35%	345	31.65%

Figure 1

Disclosure of Interests: None declared

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OP0251

SLE PATIENTS FROM NORTH AMERICA ARE OLDER WITH LESS SEROLOGIC ACTIVITY THAN OTHER POPULATIONS IN INTERNATIONAL CLINICAL TRIALS

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Background: Regional differences have been identified as potential confounders of SLE clinical trial results. Recently, no difference between treatment and placebo was observed in the US lupus patients when a significant treatment effect was observed in Europe¹.

Objectives: To compare SLE serologic features/markers of active disease between different geographic regions in recent multinational clinical trials.

Methods: Laboratory data of 1005 subjects from four global randomized SLE clinical trials at baseline were examined. Mean/median C3 and C4 complement levels, prevalence of low C3 or C4 (**Low C3/C4**), positive anti-double stranded DNA (**DNA**), anti-Extractable Nuclear Antibodies (**ENA**), and high-titer Antinuclear Antibody (**ANA**≥1:640) in North America (**NA**) patients were compared to Asia (**AS**), Latin America (**LA**), Africa (**AF**), Western Europe (**WE**), and Eastern Europe (**EE**). **Results:** NA patients were significantly older than patients in LA, AF, or AS but not WE or EE. Not surprisingly, they also had higher complement levels and the lowest rates of low C3/C4, DNA, ENA, and ANA ≥1:640. Our data confirm that age is an important factor in the prevalence of low complement and autoantibodies. However, there remained a marked difference in serologic activity between NA and EE, despite being close in age.

Table: Comparison of serologic features between NA and other regions and in different age groups.

Region/Age Group	NA	LA	WE	EE	AF	AS	18-29	30-39	40-49	50-59	≥60	Total
N	164	395	27	202	58	159	237	271	259	167	71	1005
Age	Mean Med P	37.9 36 <0.001	39.7 36 ns	42.3 43 ns	40.6 49.5 <0.05	36.8 39.5 <0.05	24.4 25	34.4 34	44.5 44	53.5 53	63.9 63	39.9 39
C3	Mean Med P	1053 850 <0.001	956 920 <0.001	1044 1040 <0.001	1193 1170 ns	880 840 <0.001	950 940	1011 1000	1121 1100 #<0.001	1158 1130	1189 1190	1062 1050
C4	Mean Med P	180 176 <0.001	160 165 <0.001	171 170 <0.001	216 200 ns	163 160 <0.001	160 156	173 167	207 190 #<0.001	210 210	218 210	189 180
Low C3/C4	N P %	233.5 25 15.2	165 13 48.1	170 80 39.6	200 10 17.2	160 91 57.2	156 116 48.9	167 116 42.8	167 116 42.8	210 44 26.3	210 10 14.1	189 356 35.4
DNA	N P %	161 44 26.8	9 33.3	80 39.6	17 29.3	89 56.0	144 60.8	115 42.4	72 27.8	44 26.3	16 22.5	391 38.9
ENA	N P %	277 70.1 <0.001	18 66.7 <0.05	131 64.9 <0.001	40 69.0 <0.001	112 70.4 <0.001	175 73.8	187 69.0	157 60.6 **<0.001	100 59.9	42 59.2	661 65.8
ANA≥1:640	N P %	222 56.2 <0.001	8 29.6 ns	68 33.7 <0.001	30 51.7 <0.001	63 39.6 <0.001	140 59.1	149 55.0	111 42.9 **<0.001	82 49.1	28 39.4	510 50.7

Asian patients were the youngest, had the lowest complement levels and the highest rate of ENA & DNA consistent with high disease activity. Low complement, but not DNA, was relatively common in Europe. LA patients, like Asians, had high rates of serologic activity but less incidence of low C3/C4, suggesting that this population may have intrinsic disease severity without being as acutely active.

*Mann-Whitney Rank Sum **Chi-square *One-way ANOVA on ranks; Med-median p-p value C-comparator ns-not significant; Data not corrected for multiple comparisons

Conclusion: SLE patients entering studies from North America are strikingly less likely to have markers of active disease than other regions, raising concerns for their suitability for trials. This appears to be associated, at least in part, with age, although more aggressive treatments cannot be ruled out.

Asian subjects have the greatest prevalence of autoantibodies and low complement. Latin American patients have high prevalence of ANA≥1:640 and other autoantibodies, but less evidence of low complements.

These findings may help to explain regional differences in treatment/placebo responses and emphasize the importance of geographical stratification and improved methods to screen out patients unsuitable for SLE trials.

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OP0252

NEUROPATHIES IN SYSTEMIC LUPUS ERYTHEMATOSUS: RESULTS FROM AN INTERNATIONAL, INCEPTION COHORT STUDY

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Background: Central nervous system (CNS) involvement accounts for over 90% of neuropsychiatric (NP) events compared to involvement of the peripheral nervous system (PNS) which accounts for most of the other events. Although there is a large body of work on CNS disease in SLE patients, involvement of the PNS is less well established.

Objectives: In a multi-ethnic/racial, prospective SLE inception cohort, to determine the clinical characteristics, associations and outcomes in different types of peripheral nervous system (PNS) disease.

Methods: Patients were evaluated annually for 19 NP events including seven types of PNS disease. Standardized case definitions and attribution models for each type of PNS event were used. SLE disease activity (SLEDAI-2K), organ damage (SLICC/ACR damage index), autoantibodies, patient (SF-36) and physician (Likert score) assessment of outcome were measured. Time to event and linear regressions were used as appropriate.

Results: Of 1,827 SLE patients, 88.8% were female, 48.8% Caucasian. The mean±SD age was 35.1±13.3 years, disease duration at enrollment 5.6±4.2 months and follow-up 7.6±4.6 years. There were 161 PNS events in 139/1,827 (7.6%) patients. The predominant events were peripheral neuropathy [66/161 (41.0%)], mononeuropathy [44/161 (27.3%)] and cranial neuropathy [39/161 (24.2%)] and the majority were attributed to SLE. Multivariate Cox regressions suggested longer time to resolution in patients with prior history of neuropathy, older age at SLE diagnosis, higher SLEDAI-2K scores, and for peripheral neuropathy versus other neuropathies. Neuropathy was associated with significantly lower SF-36 physical and mental component summary scores versus patients without NP events. By physician assessment, the majority of neuropathies