Graph 1. Patients with attributable NPSLE were younger, had earlier disease onset, presented higher disease activity, lower damage accrual without taking NP damage into account and more often had increased anti-dsDNA serum concentration.

Table 1. Demographic and laboratory characteristics with disease activity and damage of the study groups, N(%) or mean(±SD).

Characteristic	Patients with attributed NPSLE manifestations	Patients without attributed NPSLE manifestations
Patients	34 (23.8%)	109 (76.2%)
Sex, female	30 (88.2%)	102 (93.6%)
Age (years)	37.6 (±11.7)	44.3 (±13.9)*
Age of disease onset (years)	32.5 (±11.4)	37.6 (±12.6)*
Disease duration (years)	5.1 (±4.1)	6.8 (±5.6)
SLEDAI-2K	29.2 (±10.7)	12.2 (±8.1)*
patients with clinically active disease (defined as SLEDAI-2K≥6 in clinical manifestations)	34 (100%)	93 (85.3%)*
SLEDAI-2K without NP manifestations	14.8 (±8.4)	11.0 (±6.7)*
PGA	2.1 (±1.0)	1.2 (±1.0)*
SDI	0.5 (±0.8)	0.7 (±1.1)
SDI without NP damage	0.3 (±0.6)	0.7 (±1.1)*
low C3/C4 complement component concentration in serum	21 (61.8%)	55 (50.4%)
elevated anti-dsDNA autoantibody concentration in serum	27 (79.4%)	55 (50.4%)*

NPSLE – neuropsychiatric systemic lupus erythematosus, SLEDAI-2K – Systemic Lupus Erythematosus Disease Activity Index version 2000, PGA – physician global assessment, SDI – SLICC/ACR (Systemic Lupus International Collaborating Clinics/American College of Rheumatology) Damage Index

*p<0.05, Mann-Whitney U, χ^2 or Fisher's exact test, as appropriate

Conclusion: Primary NP manifestations in patients with SLE occur mainly in young patients with high disease activity. Cerebrovascular disease, seizures, psychosis and cranial neuropathy are most frequent primary NPSLE manifestations.

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Graph 1. Attribution of neuropsychiatric manifestations to systemic lupus erythematosus (% of attributed manifestations are presented above the bars).

Disclosure of Interests: None declared

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FRI0185 DIAGNOSTIC SIGNIFICANCES OF BOTH MICRORNA-146A AND KALLIKREIN-1 IN PATIENTS WITH LUPUS NEPHRITIS

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Background: Lupus nephritis (LN) is one of the most critical complications of systemic lupus erythematosus (SLE). Approximately 30–50% of SLE patients develop LN with 5-year survival rate of about 70–80%. Thus, finding reliable non-invasive biomarkers at the early stages of SLE is of great interest (1). Many studies focused on the association between microRNAs and the risk of LN. miR-NA-146a (miR-146a) was one of the most promising circulating markers which was suggested recently for early diagnosis of SLE but its diagnostic relevancies regarding LN have not been extensively investigated.

Objectives: This study aims to test the expression of miR-146a in patients with LN in relation to Kallikrein-1 as another widely investigated diagnostic marker for LN along with other conventional measures.

Methods: One hundred and thirty subjects were enrolled in this study. They were divided into forty six patients with LN, forty four patients with SLE but without nephritis and forty healthy controls. The expression levels of miR-146a in peripheral blood mononuclear cells (PBMCs) were detected via RT-qPCR analysis. Besides, serum Kallikrein-1 levels were determined by ELISA. The diagnostic role of miR-146a and Kallikrein-1 in LN was evaluated by Receiver operating curve (ROC). The impact of miR-146a and Kallikrein-1 on renal disease was compared to albumin creatinine ratio, renal biopsy findings as well as renal SLEDAI.

Results: Levels of miR-146a were significantly lower in the plasma of LN patients than both patients of SLE without LN and normal controls ($p < 0.05$). However, serum levels of Kallikrein-1 were significantly higher in LN patients when compared to SLE patients and normal population ($p < 0.05$). ROCs were conducted to assess the diagnostic values of both miR-146a and kallikrein-1. They revealed good diagnostic values with AUC of 0.888 and 0.913 respectively. Also, plasma miR-146a was observed to be negatively associated with serum creatinine, proteinuria as well as SLEDAI score ($p < 0.01$) while serum Kallikrein-1 was positively correlated with them ($p < 0.05$) and inversely correlated with miR-146a ($p < 0.01$).

Conclusion: The expression levels of miR-146a are reduced in SLE patients with more reduction with LN. Therefore, miR-146a could be considered as potential biomarker for detecting LN either alone or in combination with Kallikrein-1. However, more studies are required.

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FRI0186

JOINT INVOLVEMENT AND DISEASE ACTIVITY IN SYSTEMIC LUPUS ERYTHEMATOSUS PATIENTS: CALCULATION OF SWOLLEN TO TENDER JOINT COUNT RATIO IN A REAL WORLD COHORT IN THE US

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Background: Joint swelling and tenderness are common in patients with systemic lupus erythematosus (SLE). Swollen to tender joint count ratio (STR) is an index originally used in rheumatoid arthritis (RA) which assesses severity of disease activity based on 28 joints counts [1]. In RA, STR is a predictor of treatment response with a higher score indicating greater likelihood of responding.

Objectives: To characterize SLE patients in a real-world cohort based on disease activity as defined by STR.

Methods: The OM1 SLE Registry (OM1, Boston, MA) follows more than 37,000 SLE patients longitudinally with deep clinical data, including laboratory, patient-reported and disease activity information, and linked administrative claims, starting from 2013. Patients ≥16 years of age with swollen and tender joint counts based on 28 joints on the same encounter were included. STRs were calculated by inserting 1 if the denominator was 0 [2]. Patients were categorized by first available STR as having low (STR <0.5), moderate (0.5 ≤ STR ≤ 1.0), and high (STR >1.0) disease activity. Clinical characteristics were summarized by disease activity group. Definitions of SLE treatments were based on 2019 EULAR recommendations [3].

Results: As of December 2019, there were 9,919 patients with at least one STR available in the OM1 SLE Registry. STR was low in 80.4%, moderate in 12.2%, and high in 7.4% of patients. Mean age overall was 52.1 years (standard deviation: 14.8), 92.1% were female, and 71.8% of 7,730 patients with known race were white. Clinical characteristics by STR group are described in Table 1. Antimalarial use decreased and immunosuppressant use increased with increasing STR. Use of select disease-modifying antirheumatic drugs