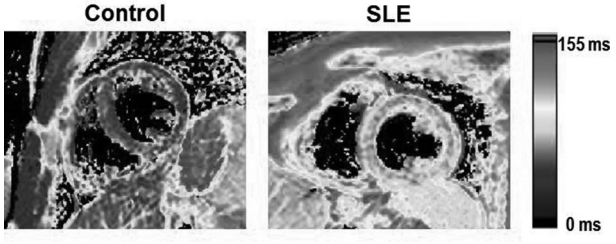
NYHA II) but absence of pathological findings in electrocardiogram (ECG), echocardiography and lung function were investigated by CMR. CMR was conducted with a 1.5 Tesla MRI-System (Achieva, Philips, Best, Netherlands) using a 32-channel coil. T2 mapping was done using a respiration navigator gated Gradient and Spin-Echo sequence (GRASE, 15 T2 echoes separated by 10 ms, res: 1 × 1 × 10 mm², 3 short axis slices). Images were post-processed using software based on the LabView environment for local T2 value generation (T2 mapping). Strain analysis was conducted entering cine-images into myocardial feature tracking (FTI) analysis software (TomTec Imaging Systems, Unterschleißheim, Germany). A cohort eleven of age and gender matched healthy controls (HC) served as controls.

Results All SLE patients showed significantly extended T2 times as a sign of local inflammation compared with age matched healthy controls ($p<0.05$). Moreover, the global systolic longitudinal strain (GLS) as means by systolic function was significantly decreased. In addition, global early diastolic strain rate displayed diastolic dysfunction in comparison to controls.

Conclusions SLE patients with persistent dyspnoea in absence of pathological findings in ECG and echocardiography showed significantly extended T2-times in MRI as a sign of local fluid content as a part of myocardial inflammation, reduced GLS and diastolic dysfunction, which would be missed by using conventional technics. CMR and T2-mapping is a possible tool for the investigation of a cardiac involvement in SLE patients and should be investigated in clinical studies.



Abstract PS6:123 Figure 1

PS6:124 ALGORITHMS TO IDENTIFY SLE FROM EHR DATA

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Background SLE is difficult to diagnose because of the diverse manifestations occurring over time and across care sites. Electronic health records (EHR) present a rich source of patient information which can be mined for diagnosis and identification to improve quality of care or to enrol patients in studies.

Aim Build a rule-based algorithm for each revised 1982/1997 ACR classification criteria for SLE using EHR data.

Methods We included patients from the Chicago Lupus Database (CLD) fulfilling 4 or more of the ACR classification criteria for SLE who also had records in the Northwestern Medicine Electronic Data Warehouse (NMEDW) EHR. ICD-9 codes and lab test results for each ACR SLE criterion were ascertained. We queried patient diagnoses, lab results and used a simple chart string for lab test results from physician notes.

Abstract PS6:124 Table 1 Comparing the frequency of received ACR classification criteria for CLE identified in two database, CLD (disease specific) and NMEDW (EHR)

	CLD	NMEDW
Malar/Discoid Rash	41.8%/6.7%	42.3%/ 0%
Photosensitivity/Oral Ulcers	62.3%/42.6 %	7%/17.6%
Arthritis/Serositis	82.9%/39.7 %	5.8%/48.6%
Renal/Neurologic Disorder	39.7%/ 7.7%	50.7%/17.1%
Immunologic Disorder	71.9%	27.9%
Anti-Nuclear Antibody	95%	24%
Hematologic Disorder	54.8%	23.6%

Results Data from 515/783 patients in CLD and the NMEDW EHR were included. When using ICD 9 codes only 8.8% of patients from CLD/NMEDW were identified. With the addition of lab results to the query concordance increased to 54.7%, and a simple text string query to search physician notes for additional lab results increased identification to 57.5%.

Conclusion Using ICD codes plus laboratory data from NMEDW increased fulfilment of classification criteria but is still not optimal for patient identification. Additional strategies such as using natural language processing (NLP) or examining fulfilment of SLICC classification criteria for SLE which includes more lab results than ACR may yield an improved rule-based algorithm for the identification of SLE patients in EHR data.

PS6:125 SYSTEMIC LUPUS ERYTHEMATOSUS DIAGNOSIS IS EARLIER IN MALES COMPARED TO FEMALES

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Background Systemic lupus erythematosus (SLE) is a chronic autoimmune disease. It affects both men and women, with a female predominance. On the other hand, many different studies have showed that disease manifestations and their severities are different in the males and females. The aim of our study was to detect whether sex variation leads to diagnostic delay.

Methods SLE patients, those admitted our outpatient clinic between January 2017 and August 2017, were enrolled in the study. 46 patients fulfilling the SLICC classification criteria for SLE and regularly followed at our rheumatology clinic were selected. At the time of enrollment, medical and pharmacological histories were collected. Patients, those have >6 months duration between starting symptoms to diagnosis, were accepted to have diagnostic delay. Statistical comparisons were made using Mann Whitney U test and chi-square tests.

Results Diagnostic delay was detected in the 25% of males and 73.8% of females ($p=0.043$). The diagnosis was earlier in the males compared to the females (OR: 2.7, 95% CI: 1.3 to 6.1).

Conclusion SLE is a multisystem complex autoimmune disease that often mimics symptoms of other illnesses. Many SLE manifestations such as fatigue, hair loss, arthralgia and anaemia in especially females are confounding for clinicians in the diagnostic process. Clinicians carefully investigate the diagnosis for these manifestations in males, since various frequent diseases are suspected in females. Therefore, SLE diagnosis is earlier in males compared to females.