Abstract 454 Table 2

| | Concern Ranking Physicians (n=21) | n physicians who rated "5" (%) | Patient Concern Median (IQR) | Physician Concern Median (IQR) | p-value |
|---|---|---|---|---|---|
| 1 | Seizures | 18 (85.7%) | 4 (2-5) | 5 (5-5) | 0.003 |
| 2 | Strokes | 18 (85.7%) | 3.5 (2-5) | 5 (5-5) | 0.002 |
| 3 | Kidney failure | 18 (85.7%) | 4 (3-5) | 5 (5-5) | 0.003 |
| 4 | Kidney disease | 17 (81.0%) | 5 (3-5) | 5 (5-5) | 0.02 |
| 5 | Blood clots | 16 (80.0%) | 4 (3-5) | 5 (5-5) | 0.001 |
| 6 | Osteoporosis caused by Lupus medication | 16 (76.2%) | 4 (3-5) | 5 (5-5) | 0.01 |
| 7 | Shortness of breath | 14 (66.7%) | 4 (4-5) | 5 (4-5) | 0.05 |
| 8 | Vision changes | 14 (66.7%) | 4 (3-5) | 5 (4-5) | 0.03 |
| 9 | Heart disease | 13 (61.9%) | 4.5 (3-5) | 5 (4-5) | 0.05 |
| 10 | Lung disease | 13 (61.9%) | 4 (2.5-5) | 5 (4-5) | 0.01 |

## 456 INTERLEUKIN-17 (IL-17) SERUM AND CORRELATION WITH DISEASE ACTIVITY IN NEPHRITIS AND NON LUPUS NEPHRITIS

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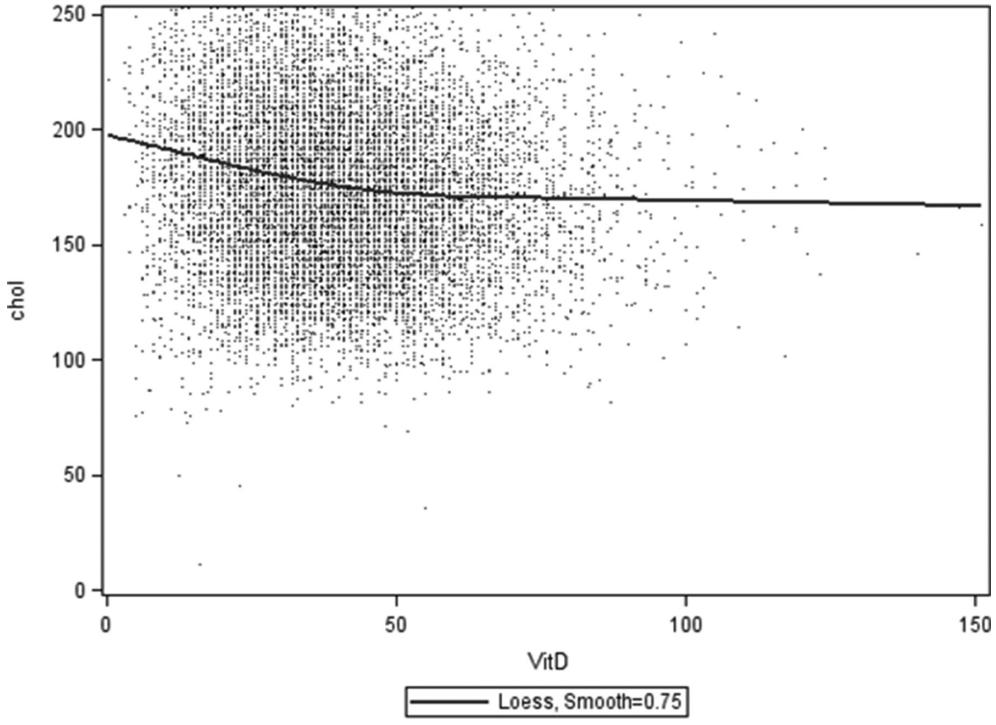
**Background and aims** Lupus Nephritis (LN) is one of the most serious manifestations and the strongest predictors of poor outcome in systemic lupus erythematosus (SLE). Recent evidence showed a potential role of interleukin-17 (IL-17) in the pathogenesis of LN. However, the correlation between IL-17 level and the severity of LN remains incompletely understood.

**Objective** To analyse IL-17 serum in LN and non LN patients and its correlation with disease activity measured by Systemic Lupus Activity Measure (SLAM) score.

**Methods** A cross sectional design was conducted with 40 SLE patients consisted of 22 LN (group 1) and 18 non LN (group 2). We used SLICC criteria to diagnose SLE, ACR to diagnose LN with urinalysis, and ELISA to measure IL-17 concentration.

**Results** Mean age group 1 25.68±7.12 y.o and 27.11±6.79 y.o in group 2. The mean differences of proteinuria, CRP, IL-17, and SLAM score between group 1 and group 2 were 4.73 mg (90.9% proteinuria +3) vs 2.06 mg; 1.64±0.89 vs 1.33±0.59; 9.64±1.64 vs 8.69±0.76; 16.36±5.30 vs 11.11 ±5.22. The correlation between IL-17 and SLAM score was 0.018 ($p<0.05$ ) in group 1 and 0.35 ($p>0.05$) in group 2.




**Abstract 455 Figure 1** Serum Cholestrol (mg/dl) vs Serum Vitamin D (ng/ml) with nonparametric estimate of the mean.

**Abstract 455 Table 1** Slope of relationship between 25(OH)D and mean Cholesterol over difference ranges of 25(OH)D.

| Range of 25(OH)D | Estimated slope (95% Confidence Interval) | | | |
|---|---|---|---|---|
| | Unadjusted | P-value | Adjusted | P-value |
| 0-50 ng/ml | -0.37 (-0.42, -0.32) | <0.0001 | -0.30 (-0.35, -0.24) | <0.0001 |
| 50+ ng/ml | -0.09 (-0.15, -0.02) | 0.014 | -0.11 (-0.18, -0.03) | 0.0037 |

[1] Adjusted for age, age-squared, sex, race, proportion of time on hydroxychloroquine use, corticosteroid use, BMI and systolic blood pressure.

**Conclusions** Lupus Nephritis has higher IL-17 serum level and SLAM score compared to non lupus nephritis. There is significant correlation between IL-17 and SLAM score in LN but not significant in non LN.

## 457 ALGORITHMS TO IDENTIFY SYSTEMIC LUPUS ERYTHEMATOSUS (SLE) FROM ELECTRONIC HEALTH RECORD (EHR) DATA

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**Background and aims** 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.

**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.