**Results** Among 548 patients who were currently follow-up, 171 patients had 1st LN episode. Of these, 87 patients (96.6% female with mean age 29.5±10.8 years) met the inclusion criteria. During 6.1±3.4 years of observation, the incident of LN flare was 48.3%. The mean time from CR to flare was 3.14 years (min 0.5, max 9.5). Logistic regression analysis revealed remaining dose of prednisololne ≥7.5 mg/day after remission reduced incidence of renal flare (Odd ratio 0.26 (95%CI 0.08–0.85), p=0.025), while demographic characteristics, clinical variables, and other treatments variables were not associated with incidence of LN flare.
**Conclusions** Although achieving CR with standard treatment, almost half of patients had LN flare within a few years. This study emphasise that maintenance phase in LN is crucial.

## 407 USING DECISION TREE TO IDENTIFY THE ITP WITH HIGH PROBABILITY OF SLE DEVELOPMENT FROM A NATIONWIDE COHORT STUDY

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10.1136/lupus-2017-000215.407

**Background and aims** Idiopathic thrombocytopenic purpura (ITP) is an immune-related thrombocytopenia which may herald the development of systemic lupus erythematosus (SLE), and thus regular following up has been suggested. Whereas widespread surveillance on all ITP patients would be time and cost-consuming; therefore identifying those with high probability of development of SLE among ITP patients should be more practical.
**Methods** We enrolled ITP patients without previous SLE diagnosis from the Taiwan National Health Insurance research database between 1997 and 2012 and identified those with SLE diagnosis during follow up. We also analysed the symptoms and comorbidities as well as the dose of average oral steroid to derive the decision trees, which classified the ITP patients with different probability of development of SLE.
**Results** A total of 10 265 ITP patients were enrolled, among whom 80 patients developed SLE while following-up. The whole ITP patients were allocated to development group (7186 patients including 57 with SLE) and validation group (3079 patients including 23 with SLE); the former was used for derivation of the decision-tree based model (Figure 1) and the latter for validation of the previously mentioned model (Figure 2), and provided high sensitivity (78.2%), specificity (99.2%) and negative prediction value (99.8%). To reduce the complexity, we also proposed another models with different complexity parameters (Figure 3).
**Conclusions** We derived different decision tree models exempt from the necessity of laboratory data and adequate for various clinical scenarios of ITP patients, among whom those with high probability of development of SLE could be identified.

## 408 ANALYSIS OF INFLUENCING FACTORS ON QUALITY OF LIFE OF PATIENTS WITH SLE

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10.1136/lupus-2017-000215.408

**Background and aims** To investigate the influencing factors of quality of life (QOL) of patients with systemic lupus erythematosus (SLE).
**Methods** QOL of 104 SLE patients were investigated by SF-36 scale (Chinese version). Depression, anxiety, social support, sleep quality and fatigue were evaluated by PHQ-9, GAD-7, social support rating scale (SSRS), Pittsburgh sleep quality index (PSQI) and VAS respectively. The demographic and clinical data were also recorded. SLE disease activity was assessed by SLEDAI.
**Results** In SF-36 scale, scores of SLE patients were lower than normal people in global score and in all dimensionalities (p<0.05). SLEDAI, PHQ-9, GAD-7, PQSI and fatigue correlated negatively with SF-36 scores (p<0.01). SSRS correlated positively with SF-36 scores (p<0.01). In binary logistic regression analyses, disease activity, anxiety, social support, sleep quality and fatigue were the independent determinants of QOL in SLE ($R^2$=0.860, p<0.01).
**Conclusions** QOL of SLE patients are lower than normal people. Disease activity, anxiety, social support, sleep quality and fatigue are the major influencing factors of QOL in SLE.

## 409 DISEASE SEVERITY AND BURDEN IN JAPANESE PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS FROM CLAIMS DATABASE

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10.1136/lupus-2017-000215.409

**Background and aims** Disease burdens in Japanese patients with systemic lupus erythematosus (SLE) remain unclear. This study assessed disease burden of Japanese SLE patients with different disease activity in claims database.

**Abstract 409 Table 1** Demographics and characteristics.

| Total number | | 295 |
|---|---|---|
| Disease severity | | |
| *Mild* | N(%) | 28 (9.5) |
| *Moderate* | N(%) | 134 (45.4) |
| *Severe* | N(%) | 133 (45.1) |
| Female | N(%) | 256 (86.8) |
| Age at the index | (mean year ± SD) | 41.6 ± 10.3 |
| Treatment period at the index | (mean year ± SD) | 6.5 ± 6.0 |
| Principle insurer (full time worker) | N(%) | 107 (36.3) |
| Hospitalization during the study period | N(%) | 116 (39.3) |
| CNS lupus | N(%) | 12 (4.5) |
| Lupus nephritis | N(%) | 110 (41.2) |

**Abstract 409 Table 2** Number of patients with comorbidity by disease severity.

| Disease class | Number (%) | | | | P value |
|---|---|---|---|---|---|
| | Total N = 295 | Mild N = 28 | Moderate N = 134 | Severe N = 133 | Fisher's exact test among severity groups |
| Inflammation | 278 (94.2) | 24 (85.7) | 126 (94.0) | 128 (96.2) | 0.088 |
| Hypertensive, Cardiovascular diseases | 218 (73.9) | 17 (60.7) | 88 (65.7) | 113 (85.0) | <0.001 |
| Solid organ malignancy | 19 (6.4) | 2 (7.1) | 6 (4.5) | 11 (8.3) | 0.441 |
| Hematological malignancy | 12 (4.1) | 0 (0.0) | 7 (5.2) | 5 (3.8) | 0.629 |
| Hyperlipidemia | 156 (52.9) | 8 (28.6) | 66 (49.3) | 82 (61.7) | 0.003 |
| Diabetes mellitus | 116 (39.3) | 7 (25.0) | 52 (38.8) | 57 (42.9) | 0.213 |
| Disease with psychological symptom | 124 (42.0) | 9 (32.1) | 44 (32.8) | 71 (53.4) | 0.002 |

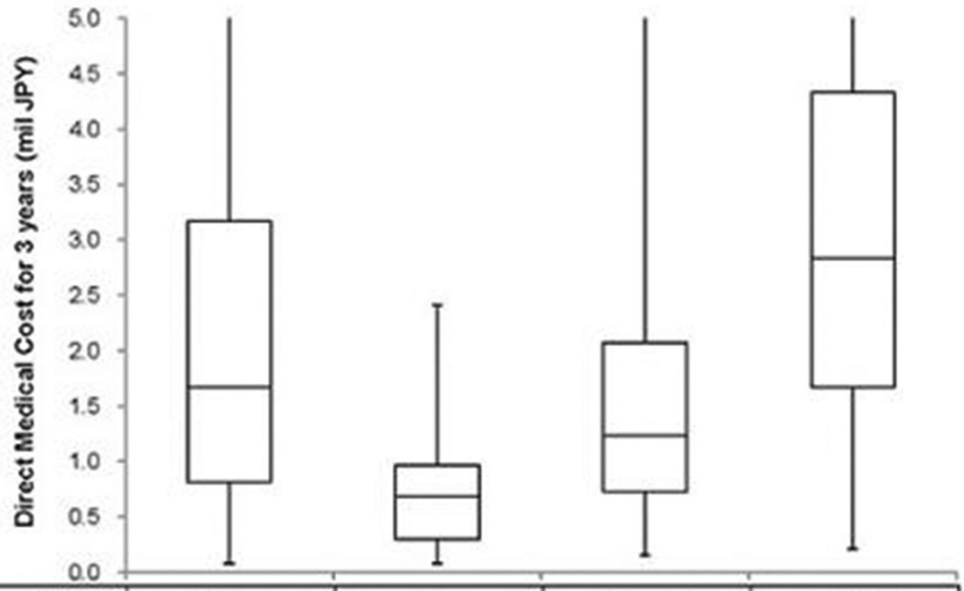
**Abstract 409 Table 3** Number of patients prescribed with medication classes by disease severity.

| Medication class | Number (%) | | | | P value |
|---|---|---|---|---|---|
| | Total N = 295 | Mild N = 28 | Moderate N = 134 | Severe N = 133 | Fisher's exact test among severity groups |
| Corticosteroids (oral and injection) | 255 (86.4) | 16 (57.1) | 118 (88.1) | 121 (91.0) | <0.001 |
| Immunosuppressants | 120 (40.7) | 0 (0.0) | 52 (38.8) | 68 (51.1) | <0.001 |
| Intravenous Immunoglobulin | 8 (2.7) | 0 (0.0) | 1 (0.7) | 7 (5.3) | 0.069 |
| Topical steroid | 168 (56.9) | 14 (50.0) | 72 (53.7) | 82 (61.7) | 0.323 |
| Anti-osteoporosis drugs | 201 (68.1) | 7 (25.0) | 93 (69.4) | 101 (75.9) | <0.001 |
| NSAIDs | 256 (86.8) | 18 (64.3) | 120 (89.6) | 118 (88.7) | 0.003 |

NSAIDs; Non-Steroidal Anti-Inflammatory Drugs

**Methods** This was a retrospective cohort study (No. HO-15–16208) using the Japan Medical Data Centre claims database. Patients aged 15 to 65 years who had an SLE-related visit between April 2010 and March 2012 were identified, their first visit date was set as the index. Direct medical cost, comorbidities and treatments were collected during the three-year period from the index date. Disease severity and flare episode were determined by proxy algorithms defined with steroid dosage change, immunosuppressant use, or appearance of SLE-related symptoms.

**Results** Among 295 SLE patients identified as the study cohort, disease severity of mild, moderate, and severe was 28, 134, and 133 patients, respectively. Basic characteristics are shown in Table 1. Most patients (282 patients, 95.6%) experienced at least one flare episode and the mean (SD) frequency was 5.5 (3.3) times over the three-year study period. Recorded comorbidities (inflammations, cardiovascular diseases, etc) and medications (corticosteroid, NSAIDs, etc) are shown in Table 2 and 3. Most patients were treated with multiple drug classes. Additionally, mean direct medical cost per patient




| (mil JPY) | Total | Mild | Moderate | Severe |
|---|---|---|---|---|
| Mean (SD)* | 2.91 (4.17) | 0.72 (0.49) | 1.69 (1.44) | 4.61 (5.58) |
| Median | 1.67 | 0.69 | 1.23 | 2.84 |
| Min | 0.08 | 0.08 | 0.15 | 0.21 |
| Max | 28.59 | 2.41 | 7.03 | 28.59 |

*ANOVA p<0.001 among severity groups

**Box plot diagram: Box bottom: 25 percentile, Box top: 75 percentile, Box middle bar: median, Lower whisker: minimum, Upper whisker: maximum (but limited to show upper limit 5 mil JPY)

**Abstract 409 Figure 1** Direct medical cost over the three-year study period.

was 2,913,509 JPY over the study period and ones by disease severity are shown in Figure 1.

**Conclusions** This study described the economic burden and clinical characteristics of Japanese SLE patients based on a claims database, which indicated a high level of disease burden.

**Funding** This study was funded by GlaxoSmithKline.

## 410 CLINICAL CHARACTERISTICS OF SYSTEMIC LUPUS ERYTHREMATOSUS IN AN EGYPTIAN POPULATION: A DESCRIPTIVE RETROSPECTIVE CASE SERIES

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10.1136/lupus-2017-000215.410

**Background and aims** Systemic lupus erythrematosus (SLE) is an autoimmune disease with a myriad of manifestations, that could vary among different ethnic and racial groups.

Aim of the study: To study the prevalence of various manifestations of SLE in an Egyptian population.

**Methods** Information in this study was derived from the medical records of SLE patients, who followed up in 2 private clinics in Cairo from January 1980 to June 2016.

**Results** This study included 1109 SLE patients, of which 114 (10.3%) were males and 995 were females (89.7%). Age of onset showed a mean of 26±11.19 years, and the mean of disease duration was 48.78±58.46 months. The most common manifestations were synovitis (76.7%), malar rash (48.5%), leukopenia (45.7%), and photosensitivity (45.6%). At least one of the antiphospholipid antibodies was present in 41.8% of the patients, with thromboembolic manifestations and/or recurrent fetal loss present in 18.3% of the patients. Neuropsychiatric manifestations were evident in 7.8% of the patients, with seizures being the most common neuropsychiatric manifestation, present in 4%. 33.1% of the patients had nephritis, which succeeded the onset of the disease by a mean duration of 20±21.3 months. 29.3% of the patients continued follow up and received induction therapy according to the guidelines at the time of presentation (cyclophosphamide: 11.8%, mycophenolate mofetyl: 7.6%, and azathioprine: 9.8%). Of which, 24.9% continued follow up and achieved partial (9.9%) and complete (15%) remission.

**Conclusions** Synovitis and malar rash were the most common manifestations in our study. Secondary antiphospholipid was present in 18.3% of the patients.