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 prednisolone 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, were not associated with incidence of LN flare. Characteristic, clinical variables, and other treatment variables study emphasise that maintenance phase in LN is crucial. Almost half of patients had LN flare within a few years. This analysis revealed remaining dose of prednisolone was 3.14 years (min 0.5, max 9.5). Logistic regression analysis revealed remaining dose of prednisolone ≥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 emphasised 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

Background and aims Idiopathic thrombocytic purpura (ITP) is an immune-related thrombocytic purpura which may herald the development of systemic lupus erythematosus (SLE), and thus regular follow 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 (7,186 patients including 57 with SLE) and validation group (3,079 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.