Table: Baseline characteristics of JSLE patients in the Arthritis UK Centre for Adolescent Rheumatology

	CKD	Without CKD	p
Number of patients, n (%)	17 (39%)	27 (61%)	
Female, n (%)	14 (80%)	23 (85.2%)	p= 0.47
Age at diagnosis, years	12 (10- 11)	12 (11- 15)	p= 0.62
Disease duration, years	12 (8- 14)	12 (7- 13)	p= 0.78
Highest dsDNA	215 (34- 644)	32 (6.8- 104)	p= 0.03*
SLEDAI at last assessment	2 (0- 4)	0 (0- 2)	p= 0.33
Arthritis, n (%)	13 (76%)	16 (59%)	p= 0.24
Rituximab, number of courses	1.5 (0- 2.3)	0 (0- 1)	p= 0.04*
Mycophenolate Mofetil, months	44 (21- 96)	17 (0- 70)	p= 0.04*
Steroids, months	48 (37- 82)	25 (11- 50)	p= 0.03*

Numbers are medians (interquartile ranges) unless otherwise stated. *p< 0.05 is significant

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SAT0481 DIAGNOSIS AND INITIAL MANAGEMENT OF JUVENILE-ONSET SYSTEMIC LUPUS ERYTHEMATOSUS IN THE UK AND IRELAND

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Background: The incidence of Juvenile-onset Systemic Lupus Erythematosus (JSLE) in the UK is not well described. Furthermore, we do not know how children and young people initially present and when and where they access care. Previous work has described significant variation in time to diagnosis for UK patients[1].
Objectives: To describe how patients with JSLE currently present, are diagnosed and managed across the UK.
Methods: Data was collected over 13 months on all children (aged <18 years) in the UK and Ireland with a new diagnosis of JSLE (meeting either American College of Rheumatology classification criteria (ACR-1997) or Systemic Lupus International Collaborating Clinics classification criteria (SLICC-2012)). Data was collected monthly from all UK and Ireland paediatricians using British Paediatric Surveillance Unit (BPSU) methodology[2] and from relevant adult clinicians using a parallel reporting system. Anonymised patient data was collected by the clinician and sent to the study team. Patient consent was not required following Ethical and Confidentiality Advisory Group approval.
Results: 102 cases were reported from Sept 2017–Oct 18. 65 cases were excluded (duplicate cases, diagnosis date outside study period, case definition not met, clinical data pending) and 37 included.
All patients met SLICC-2012 and 35 patients met ACR-1997. Of the two patients meeting SLICC-2012 but not ACR-1997, one had lupus nephritis on renal biopsy and positive ANA, and the other met the SLICC-2012 hypocomplementaemia criterion.
Of the 35 patients meeting ACR-1997, median age at diagnosis was 12.8 years (interquartile range (IQR) 11.8–14.7 years) with female:male gender of 4.8:1 respectively. 24/35 (69%) were non-Caucasian. Median time from symptom onset to diagnosis was 2 months (IQR 1–6 months). The longest delay was 106 months (patient initially diagnosed with Henoch Schnolein Purpura). 9/35 (26%) of patients experienced a delay in diagnosis measured by at least one of: established organ damage due to JSLE at diagnosis (5 patients), review by ≥1 paediatric sub-specialist prior JSLE diagnosis (3 patients) or patient not referred despite medical review (6 patients).
The diagnosis was made by or in conjunction with paediatric rheumatology in 21/35 (60%) patients. 4/35 (11%) patients were diagnosed solely by paediatric nephrology, 2/35 (6%) by adult rheumatology, 7/35 (20%) by general paediatrics and 1/35 (3%) by the paediatric infectious diseases team. Of the 12/35 (34%) patients where diagnosis did not involve a rheumatologist 10 were referred to either adult or paediatric rheumatology and 2 patients were managed solely by paediatric nephrology.
31/35 (89%) patients were treated with oral and/or IV steroids and 33/35 (94%) with hydroxychloroquine. Other treatments used were: mycophenolate mofetil (17/35, 49%); rituximab (8/35, 23%); azathioprine (6/35, 17%); methotrexate (5/35, 14%); cyclophosphamide (3/35, 9%); ofatumumab (1/35, 3%); IV immunoglobulin (1/35, 3%); plasmapheresis (1/35, 3%). No patients died within one month of diagnosis.
Conclusion: Diagnosis of JSLE involved paediatric rheumatology in 60% of cases. Median time to diagnosis from symptom onset is two months but there is significant variation; future work will focus on factors influencing this. Analysis of final data (2 year incidence data) will facilitate estimation of current UK incidence rate and description of factors affecting time to diagnosis.

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SAT0482 TREAT-TO-TARGET STUDY FOR IMPROVED OUTCOME IN POLYARTICULAR JUVENILE IDIOPATHIC ARTHRITIS

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Background: Evidence suggests that early effective treatment is important to minimize the burden of Juvenile idiopathic arthritis (JIA). We hypothesize that a guided treat to target (T2T) approach as recommended by the German Society for Pediatric Rheumatology (1) is superior to routine care in polyarticular JIA (pJIA) in terms of reaching minimal disease activity and remission after 12 months of treatment.
Objectives: To assess the clinical benefit in subjects with pJIA treated in compliance with national recommendations measured by rates of patients reaching JADAS remission (≤ 1), JADAS minimal disease activity (MDA) (≤3.8), JADAS acceptable disease status (≤ 5.4).
Methods: After informed consent, patients with early (disease duration ≤ 12 months) and active (JADAS10 > 5.4) pJIA were enrolled. Initially, all patients received methotrexate (MTX). Targets for treatment were defined by the level of improvement and are progressively more rigourous with ongoing treatment. Failure to meet a defined target required treatment modification of specified intervals. The choice of biologic was made by shared decision between the investigator and the patient/parent and not influenced by the protocol. Minimal treatment target defined as recognizable improvement of disease activity (2) was demanded after 3 months, JADAS acceptable disease status at month 6, JADAS MDA at month 9 and JADAS-remission at month 12. T2T Patients were 1:4 matched to a pJIA cohort with unguided therapy documented by the BIKER-registry.
Results: Altogether 62 patients (16 males, 26%) with non-systemic JIA (48/9 RF negative/positive polyarthritis, 3 extended Oligoarthritis, 1 ERA, 1PsA) were included (mean age 9.4+/-4.8 years, disease duration 0.5+/-0.6 years). At month 3; 49 (79%) patients showed JADAS improvement. In 13 (21%) treatment with a biologic was started. At month 6, 45/56 (80%) reached JADAS acceptable disease. In 6 (11%) a biologic agent was started. At month 9, 41/48 (85%) reached JADAS acceptable disease and 38/48 (79%) reached JADAS-MDA. In 4 (10.8%) a biologic was started and two patient switched biologics.
So far, 52 patients completed 12 months of observation. 4 patients did not start a biologic although mandatory according to protocol and were excluded. JADAS MDA was reached by 39/48 (81%) and JADAS remission was reached by 22/48 (46%). Compared to the matched control cohort, upon T2T guidance significant more patients reached JADAS MDA (81% vs. 60%; odds 2.9[1.3-6.3]; 0=0.006) and more patients reached JADAS remission (46% vs. 34%; odds 1.6[0.8-3.0]; p=0.15). During the first 12 months of treatment, the T2T approach lead to a significant increase of use of biologics (46% vs. 21%; odds 3.2[1.7-6.3]; p=0.0004).

	Baseline n=62	Month 3 n=62	Month 6 n=56	Month 9 n=52	Month 12n=48
JADAS mean +/-SD	19.2+/-4.9	7.8+/-5.7	4.3+/-4.8	3.2+/-4.5	2,6+/-2,8
JADAS- minimal response	n.a.	79%	89%	96%	96%
JADAS acceptable disease (≤5.4)	0,0%	37%	80%	85%	83%
JADAS MDA (≤3.8)	0,0%	34%	73%	79%	82%
JADAS Remission (≤1)	0,0%	15%	30%	44%	46%
MTX only	100%	65%	62%	50%	48%
Biologics +MTX	0%	31%	33%	37%	29%
Biologics only	0%	3%	5%	13%	19%
2nd biologic	0%	0%	0,0%	4%	4%

Conclusion: These data indicate that a T2T concept is feasible and superior. A high rate of patients reached JADAS MDA and JADAS