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POS0028

DEFINING THE PREVALENCE OF UNMET NEED IN SLE: DATA FROM A LARGE MULTINATIONAL LONGITUDINAL SLE COHORT

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Background: The recent prospectively validated definition of the lupus low disease activity state (LLDAS) allows characterisation of patients not achieving a treatment goal, providing impetus for an analysis of unmet needs in SLE using formal definitions. Other recently described definitions of high disease burden include disease activity over time, high disease activity status (HDAS) episodes, and the combination of high disease activity, serological activity and glucocorticoid (GC) use (HDAS+SA+GC).

Objectives: To determine the prevalence of formal categories of unmet need, and the association of these with adverse outcomes, in SLE.

Methods: Data from a 13-country longitudinal SLE cohort (ACR/SLICC criteria) were collected between 2013 and 19 using standard templates. Unmet need was defined as (i) patients never attaining LLDAS defined as in Golder *et al.*, 2019 [1], (ii) having persistently active disease (time adjusted mean SLEDAI-2K (AMS) > 4), (iii) ever exhibiting high disease activity status (HDAS; SLEDAI-2K ≥ 10[2]), or (iv) ever exhibiting all of SLEDAI ≥ 10, serological activity, and glucocorticoid use (HDAS+SA+GC)[3]. Health-related quality of life (HRQoL) was assessed using SF36 (v2) surveys and damage accrual using SLE Damage Index (SDI).

Results: 3,384 SLE patients were followed for 30,313 visits over median [IQR] 2.4 [0.4, 4.3] years. 53% of all visits were not in LLDAS; 813 patients (24%) never achieved LLDAS during observation. Median AMS was 3.0 [1.4, 4.9] and 34% of patients had AMS > 4 throughout the study. 25% of patients had at least one episode of HDAS, representing 8% of visits. 702 patients (21%) had at least one episode of HDAS+SA+GC, representing 8% of visits. Each of never-LLDAS, AMS>4, ever-HDAS, and ever-HDAS+SA+GC were associated with significantly greater number of physician visits, higher mean glucocorticoid dose, lower HRQoL and higher mortality. 31%, 58% and 83% of never-LLDAS, AMS>4, and ever-HDAS patients respectively were also HDAS+SA+GC on at least one occasion.

Conclusion: Data from a multinational longitudinal SLE cohort indicate that unmet need, defined by LLDAS-never, AMS>4, HDAS, or HDAS+SA+GC, is prevalent in SLE, and that these definitions are associated with poor outcomes.

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POS0029 INCIDENCE AND TREATMENT PENETRATION OF RHEUMATOID ARTHRITIS IN NORWAY – A NATIONWIDE REGISTER LINKAGE STUDY

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Background: Incidence of rheumatoid arthritis (RA) in Norway has not been evaluated in a nationwide setting.

Objectives: To estimate the incidence of RA and real-life penetration of disease-modifying antirheumatic drug (DMARD) use in Norway.

Methods: The Norwegian Cardio-Rheuma register comprises pseudonymized data from nationwide registries including the total Norwegian population ≥18 years during 2008-2017. Demographic and socioeconomic data were retrieved from the National Population Register and Statistics Norway. Data on public or private somatic specialized care episodes were collected from the Norwegian Patient register (NPR) (ICD-10 codes for diagnoses and medical procedure

codes for biologic DMARD infusions). Dispensed DMARD prescriptions were captured from the Norwegian Prescription Database. RA cases were defined as persons with NPR records of all of the following: 1) 1st episode with ICD-10 code M05/M06 as main or contributory diagnosis (index date), 2) 2nd episode with code M05/M06 within 2-year period following index date, 3) M05/M06 recorded in an internal medicine or rheumatology department during the 2-year period. Years 2008-2010 served as a look-back period to identify prevalent RA cases. To estimate person-years (pyrs) at risk, we calculated number of persons aged ≥ 18 living in Norway on the 1st of January of each year 2011-2015 and multiplied it by one year (prevalent RA cases excluded). Standardized estimates were calculated with 5-year age groups using Norwegian adult population 1st of January 2015 as the standard.

Results: Between 2011 and 2015, 9,493 persons fulfilled the RA definition (62.4% seropositive based on ICD-10 codes). Incidence rate was 49/100,000 pyrs (32 in men and 65 in women). A sensitivity analysis excluding cases who had dispensed DMARDs >12 months before index date yielded 8,125 RA cases (incidence 42/100,000 pyrs). Whereas absolute number of incident cases was highest among those aged 60-69 in both sexes, incidence was highest among those aged 70-79 (Figure 1). Both crude and age- and sex-standardized incidences were lower among persons with higher education level (crude/standardized incidence per 100,000 pyrs for those below upper secondary education 60/57; upper secondary or post-secondary non-tertiary education 53/52; higher education 36/39). Of incident cases, 94% received any DMARD treatment or glucocorticoids, 78% methotrexate, and 17% biologic DMARDs within 2 years after index date (Table 1).

Conclusion: Contemporary register-based estimate of RA incidence in Norway is comparable to other Nordic countries.^{1,2} In line with treatment recommendations, methotrexate is the most commonly used DMARD in the initial treatment strategy in Norway. One in six patients used a biologic DMARD within 2 years from 1st recorded RA diagnosis.

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Figure 1.

Table 1. Characteristics and treatment penetration of incident RA patients 2011-2015

	All	Excluding cases with DMARDs >12 months before index date
N	9493	8125
Women, n (%)	6339 (66.8)	5379 (66.2)
Age at index date, median (IQR)	60.5 (48.5 - 70.5)	60.8 (48.8 - 70.9)
RF positive, n (%)	5927 (62.4)	5193 (63.9)
Use of DMARDs after index date, n (%)		
Any conventional DMARD	7797 (82.1)	6682 (82.2)
Methotrexate	7133 (75.1)	6228 (76.7)
Sulfasalazine	902 (9.5)	745 (9.2)
Any biologic DMARD	1102 (11.6)	754 (9.3)
TNF-inhibitors	1006 (10.6)	690 (8.5)
Oral glucocorticoids	6524 (68.7)	5858 (72.1)
Any DMARD or glucocorticoids	8789 (92.6)	7498 (92.3)