Conclusions: In this cohort of patients, there was overlap between all fracture sites, with significant clustering seen in fractures of the tibia/fibula, spine, ribs, and pelvis. After adjusting for age, predictors of fracture in this cluster were smoking, HRT and increased age. This indicates that risk factors for FF are different at different sites, and affects the association of fracture between sites. Further work validating this finding is currently underway.

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SAT0706 INCIDENCE OF PSORIATIC ARTHRITIS IN GERMANY: ANALYSIS OF CLAIMS DATA FROM 65 MILLION PEOPLE FROM 2009 TO 2012

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Background: Epidemiological studies are important for understanding the etiology and burden of psoriatic arthritis (PsA). Currently, there are no data available about the incidence of PsA in Germany.

Objectives: This study aims to estimate the age-standardised incidence of diagnosed PsA for German men and women during 2009 to 2012.

Methods: Estimation of the incidence of a chronic disease from prevalence data is possible if information about the general mortality and excess mortality of diseased compared to non-diseased people are available in terms of the hazard ratio (HR).¹ Prevalence was extracted from the complete diagnosis data (in- and outpatient) from about 80% of the overall German population during 2009 to 2012. Diagnoses are based on claims data from all insurances of the German statutory health insurance (SHI) system. After determining the age-standardised sex-specific prevalence of PsA for each of the four years, the age-standardised incidence for men and women has been estimated. General mortality was obtained from the Federal Statistical Office of Germany. Since the HR is unknown in Germany, we use different scenarios motivated from a systematic review² in the range from 1.3 to 1.6.

Results: For each of the years from 2009 to 2012, a total of 127, 138, 146 and 156 thousand patients with diagnosed PsA were identified in about 65 million people from the SHI, respectively. The age-standardised prevalence increases from 1.8 to 2.1 per mil in men, and from 2.1 to 2.5 per mil in women. The estimated age-standardised incidence over the study period is shown in the figure 1. Over the study period, the incidence rate of PsA decreases for both sexes and the rate of men is lower than the rate of women. The average incidence rates are 11.5 and 14.5 per 100'000 person-years for men and women, respectively. This means that about 4700 men and 5900 women contract PsA each year. The impact of the different scenarios in HR is small.

Conclusions: These data from about 65 million people insured in the German SHI for the first time allow an estimation of the incidence of PsA in Germany. A selection bias is likely to be present, because the roughly 20% of the overall German population who could not included in the analysis (mainly privately insured people) are known to have other health risks. However, the results refer to the vast majority of the German population. The analysis cannot be adjusted for potential confounders other than age and sex (e.g., socio-economic position or presence of co-morbidities).

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SAT0707

TRENDS IN THE INCIDENCE OF RHEUMATOID ARTHRITIS IN DENMARK FROM 1995–2016: A NATIONWIDE REGISTER-BASED STUDY

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Background: Previous studies have shown conflicting results regarding temporal trends in the incidence of rheumatoid arthritis (RA).

Objectives: To investigate annual incidence rates of RA in Denmark from 1995–2016 using nationwide health care registers, and to explore how these are affected by different case definitions of RA.

Methods: The Danish National Patient Register captures all in- and outpatient (since 1977 and 1994, respectively) contacts at private and public hospitals. Excluding prevalent cases (ICD-8: 712), and using two different case-definitions, we identified all incident RA patients (ICD-10 codes M05.1;3;8;9 and M06.0;8;9) aged ≥18 in each year from 1995–2016, and calculated annual age-standardised incidence rates (per 1 00 000 person years). We used the NORDCAN population for direct standardisation, and the number of adults alive in Denmark at the beginning of each year as the denominator. We furthermore calculated the age- and sex specific incidence rates during the period. **Strict case definition:** incident patients were required to have at least two in- or outpatient visits at a rheumatology- or general internal medicine clinic/department within 90 days with RA listed as the main diagnosis. **Liberal case definition:** patients with at least two in- or outpatient contacts listing RA as a main- or contributory diagnosis within 1 year.¹

Results: We identified 26 090 and 43 080 patients using the Strict and Liberal case definitions, respectively. Patient characteristics according to choice of definition are presented in the Table. The overall incidence rates were 23.7/100,000 person years (23.4–23.9) using the Strict and 39.7/100,000 person years (39.4–40.1) using the Liberal definition. As seen from the figure 1, a slightly increasing trend in RA was observed from 1995 to 2016 independent of choice of case definition, and this increase was more pronounced in 2010.

The age-specific incidence rates were highest in women (Strict: 75/100,000 person years; Liberal: 134/100,000 person years) as well as men (Strict: 47/100,000 person years; Liberal: 81/100,000 person years) aged 70–79 years.

Table. Demographics and characteristics of rheumatoid arthritis patients diagnosed at hospitals in Denmark 1995–2016 according to case definition.

	Strict case definition	Liberal case definition
N	26 090	43 820
Mean (s.d) age at diagnosis	58.1 (15.2)	59.3 (15.5)
Females, n (%)	18 238 (70)	30 749 (70)
% with COPD	3.1	3.7
% with DM	3.3	3.8
% with CVD	7.2	8.4

Age-standardised annual incidence rates of rheumatoid arthritis in Denmark 1995–2016

Conclusions: We found a slightly increasing trend in the incidence rate of RA from 1995–2016. Further, we found that using the Liberal case definition, the overall and age- and sex specific incidence rates were remarkably similar to those reported from Sweden¹, whereas the Strict definition resulted in lower incidence rates than previously reported from other countries.

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SAT0708

WILLINGNESS TO PARTICIPATE IN RESEARCH AND REPRESENTATIVENESS OF AN ONLINE HEALTH COMMUNITY AND A PATIENT ORGANISATION POPULATION WITH RHEUMATOID ARTHRITIS

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Background: Studies requiring large numbers of participants usually recruit from hospital clinics or general practice registers. These recruitment methods are expensive, time consuming and often fail to reach recruitment targets. One method to overcome these limitations is to recruit patients directly through the internet or patient organisations. However it is not known how willing people would be to take part in different types of research and how representative participants would be of the target population.

Objectives: To describe: 1) the willingness of users of an online health community (HealthUnlocked.com (HU)) with rheumatoid arthritis (RA) to participate in research, 2) the representativeness of HU users and patient organisation members (National Rheumatoid Arthritis Society (NRAS)) with RA compared to the general RA population identified from a UK primary care research database (the Clinical Practice Research Datalink (CPRD)).

Methods: A pop-up survey was embedded on HU to determine users' willingness to participate in different types of research, demographics (age, gender, employment, postcode and ethnicity) and disease duration. NRAS provided a dataset of their members' demographics and disease characteristics. People with RA were identified from the CPRD, to represent the general RA population. Willingness and characteristics of those willing to take part in research was tabulated. The characteristics of HU users and NRAS members were compared to the characteristics of the RA cohort from CPRD.

Results: The HU survey was live for 74 days between May and August 2016 and had 1 00 112 pop-ups. 2647 people clicked on the pop-up, 900 people agreed to take part, 750 respondents had RA, of whom 135 did not provide age and gender resulting in 615 responses available for analysis. Over 80% of users were willing to complete questionnaires of different lengths, from a single questionnaire taking up to 1 min to complete, to multiple questionnaires over a number of months. 74% were willing to wear an activity tracker and 63% to use an app. Just over half (53%) were willing to take part in trials that involved visits to clinics (figure 1). Younger users were more willing to take part in all types of research, with 2% to 17% difference between those aged less than 65 years and those 65 years or over. Compared to those 65 years or over, 2% more of those aged less than 65 years were willing to complete multiple questionnaires over a number of months and 17% more were willing to provide information via an app. HU users were younger than NRAS and the general RA population (Age <55 years HU: 49%, NRAS: 23%, CPRD: 23%). Both HU and NRAS had more females, 88% and 85%, respectively, compared to CPRD 70%. A total of 61% HU participants were diagnosed in the years 2010–2016 compared to 25% in NRAS and 37% in CPRD.

Conclusions: Participants surveyed online show high rates of willingness to participate in research studies. While broadly representative of the general RA, they

were younger and more recently diagnosed and these population differences should be considered during study design.

Disclosure of Interest: None declared

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SAT0709

SUBCLINICAL HEPATITIS C VIRUS INFECTION IN EGYPTIAN PATIENTS WITH RHEUMATOLOGIC DISEASES: A MULTI-CENTRE STUDY

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Background: Egypt has the highest prevalence of hepatitis C virus (HCV) in the world. In 2015, the prevalence of HCV RNA was found to be 7.0%.⁽¹⁾ The prevalence of HCV was studied in Rheumatoid arthritis in few studies,^(2,3) but to our knowledge, no previous work studied it in other rheumatologic patients.

Objectives: This study aims at detecting the prevalence of subclinical HCV infection in different rheumatologic disease groups in Egypt.

Methods: Consecutive patients with different rheumatologic diseases from seven- geographically different- rheumatology departments were prospectively studied. None of the patients was known to have previous HCV infection. Patients' serum samples were screened for the presence of anti-HCV antibodies. Patients with positive serology were further evaluated for the presence of HCV ribonucleic acid by reverse transcriptase polymerase chain reaction (RT-PCR).

Results: 1454 rheumatic patients (1242 (85.4%) women, 212 (14.5%) men) with mean age[SD] of 43.7 [12.7] years were included in this study. Both anti-HCV serology and HCV RNA were positive in 124 patients (8.5%). Positive PCR for HCV was significantly higher in the age group of 40 to <60 years (p<0.0001) versus other age groups. No statistically significant difference in HCV PCR positivity was found in relation to gender, specific rheumatologic disease, comorbidities or disease duration among studied patients. AST and ALT serum levels were significantly higher in the HCV PCR positive patients (p<0.0001 and p=0.002 respectively).

Geographic area	Anti HCV PCR Positive No=124 (8.5%)	Total No. No=1454	P value P1
Assiut	48 (9.5%)	504 (34.7%)	0.947
Tanta	14 (6.9%)	202 (13.9%)	
AL-Behera	14 (9.6%)	146 (10.0%)	
Cairo	24 (6.9%)	346 (23.8%)	0.053
Aswan	10 (8.2%)	122 (8.4%)	
Sharkeya	14 (10.4%)	134 (9.2%)	
Diagnosed Diseases			P2
-Rheumatoid arthritis	82 (8.4%)	974 (67.1%)	0.053
-Systemic Lupus erythematosus	10 (5.1%)	196 (13.5%)	
-Scleroderma	0 (0.0%)	38 (2.6%)	
-Behcet's Disease	2 (3.7%)	54 (3.7%)	0.924
-Crystal arthropathy	4 (8.7%)	46 (3.2%)	
-Others	26 (18.1%)	144 (9.9%)	
Disease duration			P3
<5 years	44 (8.1%)	546 (37.6%)	0.924
5–10 years	52 (9.0%)	578 (39.8%)	
>10 years	28 (8.5%)	330 (22.7%)	

Table (1): Number and percentage of positive HCV PCR and statistical significant differences among geographic areas (P1), among different diseases (P2), and between age groups(P3)

Conclusions: The detection of subclinical HCV infection in 8.5% of rheumatologic patients in Egypt with significant higher level in the middle age group, draws attention to the importance of screening for HCV in such population for early detection and intervention.

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