

Wels; <sup>6</sup>Rheumazentrum Wien-Oberlaa, Vienna; <sup>7</sup>Karl Landsteiner Institute of Clinical Rheumatology, Stockerau, Austria

**Background:** Remission or at least low disease activity is the aim of drug therapy in patients with chronic inflammatory rheumatic diseases. We evaluated disease activity in patients treated with biologics and using data of the Austrian biologic registry.

**Objectives:** The aim of this evaluation was to elucidate disease activity in patients with rheumatoid arthritis (RA), spondyloarthritis (SpA) and psoriatic arthritis (PsA) at baseline and at control-visits every six months after inclusion in BioReg.

**Methods:** Data were extracted from the Austrian BioReg registry (<http://www.bioreg.at>) which was initiated in 2009 to document patients treated with one of the biologics approved in Austria. Patients with ongoing biologic therapy as well as biologic-naïve patients starting biologic therapy can be included (baseline, BL). Further documentation is recommended about every six months (V1, V2 up to V11). Meanwhile, 1877 patients (rheumatoid arthritis (RA) n=1046, ankylosing spondylitis (SpA) n=446, psoriatic arthritis (PsA) n=322, other disease n=63) have been documented. Estimation of disease activity is done using DAS-28 as well as RADAI-5 in RA, SASPA in PsA, and BASDAI in SpA.

**Results:** DAS-28 (median values of BL; V1; V2; V9; V10) of patients with RA are 3,30; 2,51; 2,58; 2,52; 2,49, the respective RADAI-5 values are 3,2; 2,4; 2,2; 2,0; 2,3. BASDAI in patients with SpA were 3,60; 2,61; 2,45; 2,63; 2,20. Median values of inflammation's laboratory markers (ESR in mm/1st hour and CRP in mg/l) were always within the normal range (ESR and CRP in RA 15; 12; 12; 12,5; 14 and 2,0; 2,0; 2,0; 2,0; in SpA: 8; 6; 7; 8; 8; and 2,0; 1,4; 1,4; 1,1; 1,0 in PsA 9; 8; 9; 7 (V7); 6 (V8); and 1,6; 1,5; 1,4; 1,9 (V7); 0,8 (V8)).

**Conclusions:** Our data confirm the efficiency of therapy with biologics. During 5 years of continuous treatment more than half of patients with RA reach and keep remission with a DAS-28 below 2,6 and normal values of ESR and CRP. Also patients with SpA and PsA show similar successful therapeutic response.

**Acknowledgements:** BIOREG is supported by an unlimited industrial grant

**Disclosure of Interest:** None declared

**DOI:** 10.1136/annrheumdis-2017-eular.3898

#### AB1145 GENDER, AGE AND PULMONARY FUNCTION IN DOMINICAN PATIENTS WITH RHEUMATIC DISEASES

M.A. Santos<sup>1</sup>, E. Tavera<sup>2</sup>, C. Tineo<sup>1</sup>, J. Reyes<sup>3</sup>. <sup>1</sup>Rheumatology, Hospital Regional Universitario Jose Maria Cabral y Baez; <sup>2</sup>Pneumologist, Union Medica Clinica; <sup>3</sup>Investigation, Pontificia Universidad Catolica Madre y Maestra, Santiago, Dominican Republic

**Background:** Interstitial lung disease (ILD) is a frequent entity in patients with rheumatic diseases, worsening the prognosis of those who suffer it (1). Previous studies have used the GAP (Gender, Age, Pulmonary function) model stage system to determine mortality at 1, 2 and 3 years (2). For stage I is 5.6% the first year, 10.9% second and 16.3% the third. GAP II has a mortality of 16.2%, 29.9% y 42.1% for the first, second and third year. For stage III, 39.2%, 62.1% and 76.8% respectively (3)

**Objectives:** To perform GAP model stage system in Dominican patients with Interstitial Lung Disease (ILD) related to Rheumatic Diseases (RD).

**Methods:** This is an observational, cross sectional study, with 42 patients who presented ILD related to RD. The GAP model stage system was determined by using demographic variables and pulmonary function tests such as spirometry and lung diffusion capacity (DLCO).

**Results:** 36 patients were female; the median age was 45±12 years. The mean value for Forced Vital Capacity (FVC) was 72%, Forced expiratory volume in 1 second (FEV1) 73%, and the ratio FEV1/FVC 99%. The DLCO mean value was 66±23 ml/min/mmHg. 35 patients (83.3%) were in stage I, 7 patients (16.6%) in stage II and none in stage III. The statistical significant variables were the time of diagnosis of the RD ( $p=0.013$ ); with 4.9 years for those in stage I and 10.8 years for stage II; the time of the diagnosis of the ILD ( $p=0.003$ ) with 2.1 years for patients in stage I and 4.8 years for stage II and smoking ( $p=0.063$ ).

**Conclusions:** These findings suggest that the GAP model system is an useful tool to stage patients with interstitial lung disease related to rheumatic diseases. It can also help us make changes in treatment based on the stage. Special attention must be paid to those with a longer time of diagnosis of the RD, time of diagnosis of the ILD and/or smoking.

#### References:

- [1] Vij R. Diagnosis and treatment of connective tissue disease-associated interstitial lung disease. CHEST 2013;143(3).
- [2] Hoon S. Comparisons of prognosis between surgically and clinically diagnosed idiopathic pulmonary fibrosis using GAP model. Medicine Journal 2016; vol 95 (11).
- [3] Ley B. A multidimensional index and staging system for idiopathic pulmonary fibrosis. Ann Intern Med. 2012, 156:684–691.

**Disclosure of Interest:** None declared

**DOI:** 10.1136/annrheumdis-2017-eular.2152

#### AB1146 PHARMACOLOGICAL APPROACH OF KNEE OSTEOARTHRITIS TREATMENT IN PRIMARY CARE IN SPAIN

M. Herrero Barbero<sup>1</sup>, S. Gimenez<sup>2</sup>, J. Vergara<sup>3</sup>, E. Viles I Lladó<sup>4</sup>, H. Martínez<sup>4</sup>, G. Rodríguez Roca<sup>5</sup>, L. Sánchez<sup>1</sup>, J.A. Díaz Muñoz<sup>6</sup>, J.F. Frias<sup>7</sup>, A. Castaño<sup>8</sup>, J.J. Jiménez Díaz<sup>9</sup>, Á. Rodríguez de Cossío<sup>10</sup>, R. Belenguer<sup>11</sup>, J.L. Llisteri<sup>12</sup>, J. Vergés Milano<sup>1,13</sup> on behalf of EMARTRO. <sup>1</sup>Bioiberica, Barcelona; <sup>2</sup>Unidad de Gestión Clínica el Limonar, Malaga; <sup>3</sup>Centro de Salud Huerca, Almería; <sup>4</sup>Bioiberica S.A., Barcelona; <sup>5</sup>Centro de Salud la Puebla de Montalbán, Toledo; <sup>6</sup>Centro de Salud Ávila Rural, Ávila; <sup>7</sup>Hospital Universitario Virgen de las Nieves, Granada; <sup>8</sup>Centro de Salud Corella, Navarra; <sup>9</sup>Centro de Salud Los Cubos, Burgos; <sup>10</sup>Centro de Salud San Martín de la Vega, Madrid; <sup>11</sup>Centro de Salud Algemés; <sup>12</sup>Centro de Salud Ingeniero Joaquín Belloch, Valencia; <sup>13</sup>Osteoarthritis Foundation International, Barcelona, Spain

**Background:** Osteoarthritis (OA) is the most prevalent joint disease and the leading cause of disability from 60 years onwards. In fact, 14.8% of the Spanish population has OA.

**Objectives:** This study aimed to analyze the indications and average doses prescribed in the treatment of knee osteoarthritis in Primary Care in Spain.

**Methods:** The EMARTRO study was designed as an observational, multicenter, transversal study to compare probability of suffering a comorbidities based on presence of symptomatic knee OA visited by GPs. Sociodemographic, anthropometric, clinical parameters and clinical variables of interest were recorded. The prescribed medications and doses indicated in symptomatic knee OA were analyzed in patients included in the EMARTRO study.

**Results:** A total of 1173 patients were included, of whom 646 had knee OA. Patients with OA had a mean (SD) BMI of 30.9 (5.1), systolic blood pressure 132.8 (14.5) and diastolic blood pressure 77.9 (9.1) mm Hg. They also had a mean of 4.3 (1.9) comorbidities, the most frequent were hypertension 358 (62.2%), dyslipidemia 336 (58.3%), diabetes mellitus II 126 (21.9%), and gastroesophageal reflux 110 (19.1%). As for the symptomatology, the patients presented a mean (SD) pain in Huskisson's VAS of 65.18 (15.27) mm and algofunctional Lequesne score of 11.35 (4.86).

Patients were treated with a mean of 2.2 medications. The 45.5% of osteoarthritic patients were treated as monotherapy, 35.5% were taking 2 medications for osteoarthritis, 15.3% 3 and 3.7% 4 or more medications. It should be noted, taking into account the high levels of pain, that 15% of the patients did not receive any treatment.

Regarding prescribed medications for knee OA, 378 (58.2%) patients were treated with paracetamol at a mean daily dose (SD) of 1,150.5 (1,815.5) mg; 232 (35.9%) received NSAIDs, with metamizole being the most prescribed at doses 1,012 (538) mg, ibuprofen at doses 1,136 (528,8) mg and naproxen at doses 941,2 (238,5) mg. Next, 131 (20.3%) patients were treated with opioids, tramadol being the most frequent at doses 102.7 (49.7) mg; 87 (13.3%) with SYSADOA being chondroitin sulphate the most frequent at doses 758.7 (247.7) mg. Finally, 87 (13.3%) of the patients were treated with COX-2, mainly with etoricoxib at doses of 69.3 (27.1) mg.

**Conclusions:** Although the patients presented many concomitant pathologies, it is frequent to approach osteoarthritis in polytherapy. In addition, despite the high symptomatology, patients are treated primarily with a mild analgesic such as paracetamol at doses lower than those recommended. It is paradoxical the high prescription of NSAIDs in a population with a high prevalence of cardiovascular and gastrointestinal pathologies as well as an increase in the prescription of opioids.

**Disclosure of Interest:** M. Herrero Barbero Employee of: Bioiberica, S. Gimenez: None declared, J. Vergara: None declared, E. Viles I Lladó Employee of: Bioiberica, H. Martínez Employee of: Bioiberica, G. Rodríguez Roca: None declared, L. Sánchez Employee of: Bioiberica, J. A. Díaz Muñoz: None declared, J. F. Frias: None declared, A. Castaño: None declared, J. J. Jiménez Díaz: None declared, Á. Rodríguez de Cossío: None declared, R. Belenguer: None declared, J. L. Llisteri: None declared, J. Vergés Milano Consultant for: Bioiberica, Employee of: Bioiberica

**DOI:** 10.1136/annrheumdis-2017-eular.3624

#### AB1147 COMORBIDITY PROFILE IN MEN AND WOMEN AFFECTED BY SYMPTOMATIC KNEE OSTEOARTHRITIS AND IMPACT OF GENDER IN THE SYMPTOMATOLOGY AND PERCEPTION OF HEALTH STATUS

M. Herrero Barbero<sup>1</sup>, S. Gimenez<sup>2</sup>, J. Vergara<sup>3</sup>, E. Viles I Lladó<sup>4</sup>, H. Martínez<sup>4</sup>, G. Rodríguez Roca<sup>5</sup>, L. Sánchez<sup>1</sup>, J.A. Díaz Muñoz<sup>6</sup>, J.F. Frias<sup>7</sup>, A. Castaño<sup>8</sup>, J.J. Jiménez Díaz<sup>9</sup>, Á. Rodríguez de Cossío<sup>10</sup>, R. Belenguer<sup>11</sup>, J. Vergés Milano<sup>1,12</sup>, J.L. Llisteri<sup>13</sup> on behalf of EMARTRO. <sup>1</sup>Bioiberica, Barcelona; <sup>2</sup>Unidad de Gestión Clínica el Limonar, Malaga; <sup>3</sup>Centro de Salud Huerca, Almería; <sup>4</sup>Bioiberica S.A., Barcelona; <sup>5</sup>Centro de Salud la Puebla de Montalbán, Toledo; <sup>6</sup>Centro de Salud Ávila Rural, Ávila; <sup>7</sup>Hospital Universitario Virgen de las Nieves, Granada; <sup>8</sup>Centro de Salud Corella, Navarra; <sup>9</sup>Centro de Salud Los Cubos, Burgos; <sup>10</sup>Centro de Salud San Martín de la Vega, Madrid; <sup>11</sup>Centro de Salud Algemés, Valencia; <sup>12</sup>Osteoarthritis Foundation International, Barcelona; <sup>13</sup>Centro de Salud Ingeniero Joaquín Belloch, Valencia, Spain

**Background:** Osteoarthritis (OA) is the most prevalent joint disease and the leading cause of disability from 60 years onwards. In fact, 14.8% of the Spanish

population has OA. This study aimed to analyze the indications and average doses prescribed in the treatment of knee osteoarthritis in Primary Care in Spain.

**Objectives:** This study aimed to analyze the comorbidity profile of men and women affected by symptomatic knee OA and the differences between genders in the perception of health status with regard to pain and loss of function due to their OA, quality of life and mental health.

**Methods:** The EMARTRO study was designed as an observational, multicenter, transversal study to compare probability of suffering a comorbidity based on presence of symptomatic knee OA visited by GPs. Sociodemographic, anthropometric, clinical parameters and clinical variables of interest were recorded. The probability of suffering comorbidities based on presence OA was estimated using the Odds Ratio estimation with conditioned logistic regression models. Depending on the variable, comparisons between groups were done using t-Student, Chi-square and Mann-Whitney.

**Results:** A total of 646 patients were included, 71% were women. Mean (SD) age was 67.9 (6.6) years.

Patients were obese without gender differences, with a BMI of 30.4 (4.4) and 31.2 (5.5) ( $p=0.0651$ ) in men and women, respectively.

Men had a mean (SD) systolic blood pressure higher than women, 134.7 (15.0) vs 132.2 (14.5) mmHg ( $p=0.0453$ ) and no differences were observed in diastolic pressure ( $p=0.5930$ ).

As regards to the concomitant pathologies, no increase was detected in the likelihood of suffering comorbidities linked to the gender [OR=0.607 (95% CI: 0.260–1.418)  $p=0.2490$ ]. Men with OA were more likely to have angina pectoris [OR=4.493 (95% CI: 1.299–15.536)  $p=0.0176$ ] and underwent coronary bypass [OR=3.706 (95% CI: 1.389–9.890)  $p=0.089$ ].

Osteoarthritic women elicited more pain in Huskisson's VAS 62.8 (14.7) vs 66.8 (15.4) mm ( $p=0.0027$ ) and worse function according to the Lequesne index 10.0 (4.9) vs 12.1 (4.7) ( $p<0.0001$ ).

In terms of quality of life according to the EuroQol, women presented worse quality of life in dimension of mobility ( $p=0.0001$ ) and in the dimensions of daily activities, pain/discomfort and anxiety/depression ( $p<0.0001$ ).

Finally, regarding mental health status, women had worse scores in the Goldberg scale to detect psychological disorders ( $p<0.0001$ ) and more cases of anxiety and depression according to the HAD scale ( $p<0.0001$ ).

**Conclusions:** The results of the present study indicate that women with osteoarthritis of the knee, despite having the same diagnosis and a similar comorbidity profile to men, have a worse perception of health status regarding the symptoms of their osteoarthritis, their quality of life and their mental health.

**Disclosure of Interest:** M. Herrero Barbero Employee of: Bioiberica, S. Gimenez: None declared, J. Vergara: None declared, E. Viles I Lladó Employee of: Bioiberica, H. Martínez Employee of: Bioiberica, G. Rodríguez Roca: None declared, L. Sánchez Employee of: Bioiberica, J. A. Díaz Muñoz: None declared, J. F. Frías: None declared, A. Castaño: None declared, J. J. Jiménez Díaz: None declared, Á. Rodríguez de Cossío: None declared, R. Belengué: None declared, J. Vergés Milano Consultant for: Bioiberica, Employee of: Bioiberica, J. L. Llisterri: None declared

DOI: 10.1136/annrheumdis-2017-eular.3625

#### AB1148 INFODEMIOLOGY AND SEASONALITY OF SYSTEMIC LUPUS ERYTHEMATOSUS USING GOOGLE TRENDS

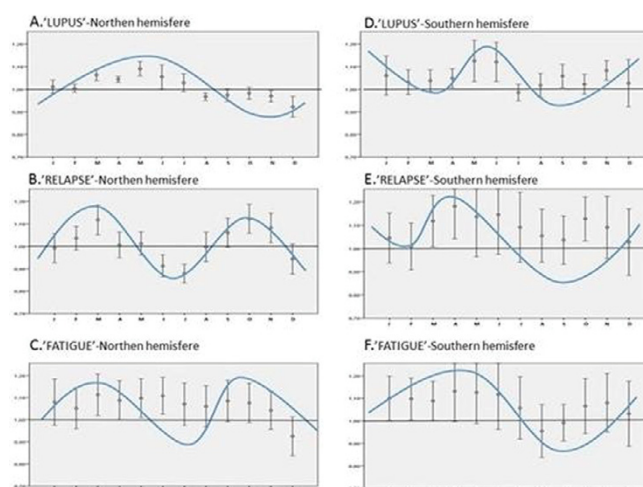
M. Radin, S. Sciascia. Department of Clinical and Biological Sciences, Center of Research of Immunopathology and Rare Diseases- Coordinating Center of Piemonte and Valle d'Aosta Network for Rare Diseases, Torino, Italy

**Background:** People affected by chronic rheumatic conditions, such as systemic lupus erythematosus (SLE), frequently rely on Internet and search engines to look for terms related to their disease, and its possible causes, symptoms and treatments. "Infodemiology" and "infoveillance" are two recent terms created to describe a new developing approach for public health, based on Big Data monitoring and data mining<sup>1</sup>. Different clinical and epidemiological studies have been conducted on seasonality of SLE, and focused on flare, fatigue and periodicity of onset of clinical manifestations. Overall, SLE disease activity has been associated with specific seasonal patterns in both, Northern and Southern hemispheres, possibly in relation to sun exposure, meteorological factors and vitamin D levels<sup>2,3</sup>.

**Objectives:** In this study, we aimed to investigate trends of Internet research linked to SLE and symptoms associated to the disease seasonality by applying a Big Data monitoring approach.

**Methods:** We analyzed the large amount of data generated by Google Trends, considering "lupus", "relapse" and "fatigue" in a 10-year web-based research. Google Trends automatically normalized data for the overall number of searches, and presented them as relative search volumes, in order to compare variations of different search terms across regions and periods. The Menn-Kendall test was used to evaluate the overall seasonal trend of each search term and possible correlation between search terms.

**Results:** We observed a seasonality for Google search volumes for lupus-related terms (Figure 1). In Northern hemisphere, relative search volumes for "lupus" were correlated with "relapse" ( $\tau=0.85$ ;  $p=0.019$ ) and with fatigue ( $\tau=0.82$ ;  $p=0.003$ ), whereas in Southern hemisphere we observed a significant correlation between "fatigue" and "relapse" ( $\tau=0.85$ ;  $p=0.018$ ). Similarly, a significant correlation



Profile plots for relative search volumes. Profile plots show the relative search volumes for 'lupus' (A and D), 'relapse' (B and E) and 'fatigue' (C and F), in the Northern and Southern hemispheres, respectively, for different months of the year, with estimates sinusoidal curves.

between "fatigue" and "relapse" ( $\tau=0.70$ ;  $p<0.001$ ) was seen also in the Northern hemisphere.

**Conclusions:** Despite the intrinsic limitations of this approach, the current study provides additional evidence for seasonality of lupus by using Google Trends. Internet-acquired data might represent a real-time surveillance tool and an alert for healthcare systems in order to plan the most appropriate resources in specific moments with higher disease burden

#### References:

- [1] Eysenbach G. Infodemiology and infoveillance: framework for an emerging set of public health informatics methods to analyze search, communication and publication behavior on the Internet. *J Med Internet Res*. 2009;11:e11.
- [2] Dall'Ara F, Andreoli L, Piva N, Piantoni S, Franceschini F, Tincani A. Winter lupus flares are associated with low vitamin D levels in a retrospective longitudinal study of Italian adult patients. *Clin Exp Rheumatol*. 33:153–8.
- [3] Zhang H, Xu S, Tang D, Liang D, Liu H. Seasonal distribution of active systemic lupus erythematosus and its correlation with meteorological factors. *2011;66:1009–1013*.

**Acknowledgements:** None.

**Disclosure of Interest:** None declared

DOI: 10.1136/annrheumdis-2017-eular.1603

#### AB1149 THE ABILITY OF THE HEALTH SYSTEM TO IDENTIFY THE BURDEN OF RHEUMATOID ARTHRITIS IN SERBIA: A EULAR SURVEY

M.I. Zlatkovic-Svenda<sup>1</sup>, R.M. Stojanovic<sup>1</sup>, S.B. Sipetic-Grujicic<sup>2</sup>, M.M. Radak-Perovic<sup>1</sup>, N.S. Damjanov<sup>1</sup>, F. Guillemin<sup>3</sup>. <sup>1</sup>Institute of Rheumatology University of Belgrade School of Medicine; <sup>2</sup>Institute of Epidemiology University of Belgrade School of Medicine, Belgrade, Serbia; <sup>3</sup>INSERM – Cic-Ec 1433, University Hospital, and Université de Lorraine, Ea 4360 Apemac, Nancy, France

**Objectives:** to estimate the rheumatoid arthritis (RA) prevalence in two urban regions of Serbia, covering the northern and the southern part, under the European League Against Rheumatism (EULAR) prevalence survey; to assess the ability of the health system to recognize and treat patients with RA.

**Methods:** The survey was conducted in four Serbian towns: Belgrade in the north and three towns in the south: Cacak (Moravicki region), Uzice (Zlatiborski region) and Krusevac (Rasinski region), covering 36.5% of the total Serbian population with more than 99% Caucasians, mostly orthodox Serbs (83%), <4% Hungarians, Roms and Bosnians and a minority of other nationalities. The first-detection phase of the study comprised previously translated and validated telephone Questionnaire usage with 33 items covering signs, symptoms, self-reported diagnosis and classification criteria for RA (ACR 1987) (1). Diagnoses were confirmed by rheumatologists in a second-confirmation phase. Prevalence results were standardized for age and sex with regard to Serbian population (national census 2002). Confirmed RA cases were asked two more questions: "How long had you had symptoms before you were given the diagnosis of RA" and "How had you been treated for that period of time".

**Results:** 6213 people were contacted and 63.6% answered the survey; joint pain was reported by 1,799 persons, and joint pain accompanied with joint swelling by 606 persons. A total of 23 RA cases were identified; 2 newly diagnosed. The standardized RA prevalence estimates were 0.30% (95% confidence interval [95% CI] 0.09;0.51) for the north, e.g. 0.09 (95% CI 0.08;0.26) for men and 0.49% (95% CI 0.19;0.79) for women. RA prevalence estimates were 0.42% (0.12;0.72) for the south; 0.28 (0.00;0.56) for men and 0.55% (0.09;1.00) for women, with