infections are the most common infections, supporting the prevention policies by vaccination for influenza viruses and Str. pneumoniae, in particular in the elderly population.

REFERENCE:
[1] Ramiro S, et al. Ann Rheum Dis. 2017;76(6):1101–1136.

Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2018-eular.2423

AB1330 A PRELIMINARY STUDY ON THE BASELINE HRCT SCORING CRITERIA FOR PREDICTING THE FIBROSIS PROGRESSION OF RA-ILD

L. Li. *Department of Rheumatology and Immunology, Beijing Chaoyang Hospital West Hospital Affiliated to Capital Medical University, beijing, China*

Background: Interstitial lung disease (ILD) is the most common pulmonary manifestation of RA. The progression of fibrosis in RA-ILD varied differently, and effective predictors of progression were absent.
Objectives: To explore the baseline HRCT scoring criteria that can predict progressive fibrosis and provide reference for clinical diagnosis and treatment.
Methods: The chest HRCT of RA-ILD patients from 2009 to 2017 were retrospectively analysed, including 102 patients with progressive fibrosis and 50 patients without progressive fibrosis. Progressive fibrosis was defined as honeycombing development or an increase in extent of reticulation on follow-up HRCT. The baseline HRCT evaluation was performed by two thoracic radiologists blinded to all patient data, which including routine interstitial lesion evaluation and fibrosis predictive score. We proposed the baseline HRCT fibrosis predictive score to differentiate progressive fibrosis from the stable patients. The score included two parts, subpleural lesion score and bronchovascular bundle thickening score, with a total score of 0–9 points.
Results: In the routine evaluation, peripheral distribution was more common in the progressive fibrosis group (78.43% VS 52%, p<0.05), traction bronchiectasis and traction bronchiolectasis both were more common in the progressive group (41.18% VS 8%, p<0.01;93.14% VS 46%, p<0.01; respectively). Compared with non-progressive fibrosis group, subpleural reticulation and subpleural linear opacities were more common in the progressive fibrosis group (79.21% VS 28%, p<0.0; 41.80% VS 14%, p<0.01; respectively), subpleural honeycombing was more common in the progressive fibrosis group (41.17% VS 20%, p<0.05), subpleural ground-glass opacity showed no difference between the two groups (52.94% VS 66%, p>0.05). Notably, subpleural honeycombing in the progressive group were all accompanied by the presence of subpleural reticulation and subpleural linear opacities on baseline HRCT. The AUC curve of fibrosis predictive score was 0.87 (95% confidence interval, 0.81, 0.93), indicating that baseline HRCT score had a better judgement value for progressive fibrosis. The cut-off value was 5.5 points (sensitivity was 64%, specificity 94%), that is, baseline HRCT score $\geq$6 points was more likely to develop progressive fibrosis. Drug interventions (glucocorticoids, cyclophosphamide) were relatively deficient in the progressive fibrosis group, (26.47% VS 44%, p<0.05; 9.80% VS 22%, p<0.05; respectively). Further analysis showed that treatment situations (glucocorticoids, cyclophosphamide) were similar between the baseline HRCT score $\geq$6 points group and the baseline HRCT score <6 points group (34.78% VS 30.12%, p>0.05; 10.14% VS 16.87%, p>0.05; respectively), suggesting that patients with potential fibrotic tendencies had not been treated actively in the early stage.
Conclusions: The baseline HRCT score has a better predictive value for the progressive fibrosis of RA-ILD, traction bronchiectasis and traction bronchiolectasis are helpful to identify progression. The baseline HRCT evaluation may provide a reference for the choice of time for treatment.
Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2018-eular.6103

AB1331 SERUM DRUG LEVELS IN THE MANAGEMENT OF RHEUMATOID ARTHRITISAND SPONDYLOARTHRITIS: A SYSTEMATIC REVIEW

M. Martín López[1], L. Carmona[2], A. Balsa[3], J. Calvo-Alén[4], R. Sanmartí[5], J. Tornero[6], T. Otón[2], J. Rosas-Gómez de Salazar[7]. *[1]Hospital Universitario 12 de Octubre*; *[2]Instituto de Salud Musculoesquelética (InMusc)*; *[3]Hospital Universitario La Paz, Madrid*; *[4]Hospital Universitario Araba, Vitoria*; *[5]Hospital Clinic de Barcelona, Barcelona*; *[6]Hospital General Universitario de Guadalajara, Guadalajara*; *[7]Hospital Marina Baixa, Villajoyosa-Alicante, Spain*

Background: Several studies in rheumatic and other inflammatory diseases treated with tumour necrosis factor-alpha inhibitors (TNFi) support the association between clinical response and trough drug levels (DL). The utility of monitoring DL in rheumatoid arthritis (RA) and spondyloarthritis (SpA) patients on biological therapy is not clear, so it is important to identify clinical situations in which, the knowledge of DL, would allow an individualised therapeutic decision in the patient, more cost-effective.
Objectives: To answer the most relevant clinical questions related to the usefulness of DL measurement in clinical practice: 1) whether, in patients in remission who are candidates for optimisation, DL predict relapse or survival to dose-titration; 2) whether, in patients with primary or secondary failure to biological agents, DL influence prognosis; and 3) whether concomitant use of methotrexate (MTX) influences the association between DL and response.
Methods: An electronic search of the major databases was performed, Medline, Embase and Cochrane Library, from inception to December 2016. We included articles published in English or Spanish on patients with RA, SpA or both, treated with TNFi, tocilizumab or abatacept, and related to answer any of the three questions of the target research. Overall characteristics and outcomes of the studies were collected in a table of evidence and the quality of the studies was assessed with a scale based on the Oxford levels of Evidence.
Results: The electronic search strategy yielded 1749 articles, twelve of which were included in this systematic review. 2 studies responded the first question, 5 the second, and 7 the third. These studies were mainly observational studies, 6 retrospective and 4 prospective cohort studies, and 2 randomised clinical trials. Sample sized varied from 24 to 395 patients, for a total of 1482 patients analysed. A total of 1281 RA patients were included (64 in the first question, 243 in the second and 1038 in the third) and 201 SpA patients (32 in the first and second questions, 169 in the third). Studies were small and with limitations, but suggest that measurement of DL may be useful in patients in remission, that higher DL predict a longer relapse-free optimisation, and in patients with failure to a biological agent, treatment may need individual adjustment according to the presence of DL or anti-drug-antibodies. In addition, MTX influences the association between response and DL in most studies, with greater controversy in tocilizumab and SpA patients.
Conclusions: Monitoring DL would allow optimal use of current biological therapies, but more studies and of better quality are needed to draw definitive conclusions. In addition, future research should be performed to determine therapeutic ranges of DL, so that the proposed algorithms can be used in a standardised and reliable manner.
Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2018-eular.7397

AB1332 FACTORS ASSOCIATED TO PERSISTENCE ON GOLIMUMAB IN PATIENTS WITH INFLAMMATORY ARTHRITIS OF THE BIOBADASER REGISTRY

M.V. Hernández[1], S. Rodriguez[1], R. Morlà[1], C. Sánchez-Piedra[2], F. Sánchez-Alonso[2], F.J. Manero[3], B. García-Magallón[4], E. Pérez-Pampín[5], C. Rodríguez-Lozano[6], M.D. Ruiz[7], A. Ortiz[8], C. Díaz-Torné[9], L. Mateo[10], J.A. Gómez-Puerta[1], R. Sanmartí[1], L. Cea-Calvo[11], J.J. Gómez-Reino[5], on behalf of BIOBADASER Study Group. *[1]Rheumatology, H Clínic Barcelona, Barcelona*; *[2]Research Unit, Spanish Society Rheumatology, Madrid*; *[3]Rheumatology, H. Miguel Servet, Zaragoza*; *[4]Rheumatology, H San Jorge, Huesca*; *[5]Rheumatology, H Univ. Santiago, Santiago de Compostela*; *[6]Rheumatology, H Gran Canaria, Las Palmas*; *[7]Rheumatology, H Virgen Macarena, Sevilla*; *[8]Rheumatology, H La Princesa, Madrid*; *[9]Rheumatology, H Sant Pau, Barcelona*; *[10]Rheumatology, H Germans Trias i Pujol, Badalona*; *[11]Medical Affairs, Merck Sharp Dohme Spain, Madrid, Spain*

Background: Persistence to treatment may be used as a surrogate marker for long-term treatment success
Objectives: To assess the probability of persistence on golimumab (GOL) up to 5 years after treatment initiation and the factors associated to longer persistence
Methods: BIOBADASER is the Spanish registry of biological drugs of the Spanish Society of Rheumatology and the Spanish Medicines Agency. A data-base analysis was done in October 2017 on all the patients who had initiated GOL for one of the approved indications (rheumatoid arthritis [RA], axial spondyloarthritis [SpA] or psoriatic arthritis [PsA]). The probability of persistence was calculated with a Kaplan-Meier test. Factors related to persistence were analysed with a Cox-regression model.
Results: 353 patients were included (105 [29.8%] RA, 147 [30.6%] axial SpA and 101 [28.6%] with PsA), mean age 52[11] years, 55% women). Median duration of disease at the onset of GOL was 8.0 [2.8–15.0] years. GOL was the first biological drug in 40.1% of the patients, second in 30.1% and third or further biological in 29.8%. Concomitant medication at GOL initiation was methotrexate (MTX) (33.7%), sulphasalazine (SSZ) (6.1%), leflunomide (LEF) (12.7%), steroids (CS) (26.0%). At the last observation on GOL, 32.0% were on MTX, 5.8% on SSZ, 12.8% on LEF, 16.3% on CS. The probability of persistence on GOL since treatment initiation was 85.9% at year 1 (95% CI 81.4–89.5), 73.7% at year 2 (67.1–79.1), 68.5% at year 3 (60.5–75.1), 60.6% (50.2–69.5) at year 4% and 57.1% (44.9–67.5) at year 5. Persistence was similar for RA, axial SpA or PsA patients (p log-rank 0.070), and higher when GOL was used as first biological agent (p log-rank <0.001). As first biological drug the probability of persistence was 94.5%

(year 1) and 85.4% (year 2), (insufficient number of cases to assess persistence at year 3 or further). As second biological drug, it was 89.8% (year 1), 75.2% (year 2), 67.4% (year 3) and 59.2% (year 4) and as third biological drug the figures were, respectively, 69.6%, 58.4%, 54.5% and 46.1%. Cox-regression analysis (table 1) showed that the probability of persistence on GOL therapy was higher in first vs second or third biological line patients (Hazard Ratio for discontinuation [HR]: 2.30 [95% CI: 1.16–4.55] for second and 3.92 [2.07–7.39] for third line), and in patients with concomitant MTX (HR discontinuation=0.55 [0.33–0.91]), and lower in those needing CS (HR discontinuation=2.83 [1.72–4.66]).

Abstract AB1332 – Table 1. Factors related to persistence of golimumab treatment

	Hazard Ratio of Discontinuation	95% Confidence Interval	p
Initial Model			
Gender (women vs men)	1.23	(0.62-2.44)	0.56
Age at golimumab initiation	1.01	(0.99-1.04)	0.25
Disease duration	0.99	(0.96-1.02)	0.38
Smoking habit	1.67	(0.85-3.26)	0.13
Overweight (vs normal)	1.61	(0.74-3.52)	0.23
Obesity (vs normal)	1.53	(0.64-3.66)	0.33
Second vs first biological drug	3.06	(1.28-7.32)	**0.01**
Third vs first biological drug	5.22	(2.18-12.49)	**<0.01**
Axial SpA vs RA	0.79	(0.36-1.73)	0.55
PsA vs RA	0.59	(0.27-1.29)	0.19
Methotrexate	0.41	(0.21-0.80)	**0.01**
Steroids	4.26	(2.26-8.04)	**<0.01**
Final Model			
Gender (women vs men)	1.38	(0.84-2.27)	0.21
Age at golimumab initiation	1.01	(1.00-1.03)	0.14
Second vs first biological drug	2.30	(1.16-4.55)	**0.02**
Third vs first biological drug	3.92	(2.07-7.39)	**<0.01**
Methotrexate	0.55	(0.33-0.91)	**0.02**
Steroids	2.83	(1.72-4.66)	**<0.01**

Conclusions: In patients with RA, axial SpA or PsA, the probability of persistence on GOL after initiation was high. The retention rate was higher both in patients with GOL as first biological drug and in those with concomitant therapy with MTX, and lower in those needing CS.
Acknowledgements: This study was funded by Merck Sharp and Dohme of Spain
Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2018-eular.4577

AB1333 RETENTION RATES OF ADALIMUMAB, ETANERCEPT, AND INFLIXIMAB AS BIOTHERAPIES FOR RHEUMATOID ARTHRITIS, SPONDYLOARTHRITIS, OR PSORIATIC ARTHRITIS PATIENTS IN DAILY PRACTICE IN AUVERGNE (FRANCE)

M. Soubrier[1], A. Fan[1], M. Couderc[1], S. Malochet-Guinamand[1], S. Mathieu[1], C. Giraud[1], A. Tournadre[1], J.-J. Dubost[1], B. Pereira[2]. [1]*Rheumatology department*; [2]*Biostatistics Unit, CHU Clermont-Ferrand, Clermont-Ferrand, France*

Background: The use of TNF-α inhibitors, has considerably improved the treatment of rheumatoid arthritis (RA), spondyloarthritis (SpA), and psoriatic arthritis (PsA). The most widely used anti-TNFs are infliximab (IFX), adalimumab (ADA), and etanercept (ETN). Their efficacy and safety have been demonstrated in randomised controlled trials, though of short duration and involving a selected patient population differing from those seen in daily practice.
Objectives: To compare, in real-life settings, the retention rates of anti-TNF treatments (ETN, ADA, or IFX) initiated as first-line biotherapy following their approval in the three clinical indications.
Methods: Monocentre retrospective cohort involving patients on initial anti-TNF therapy for RA, SpA, or PsA since 2006.
Results: Anti-TNF treatment was initiated on 228 RA (ETN 160, ADA 45, or IFX 23), 208 SpA (ETN 91, ADA 62, or IFX 55), and 81 PsA (ETN 40, ADA 26, or IFX 15) patients. Treatment retention rates at 1, 3, and 5 years were 82%, 53%, and 44% in PR; 75%, 57%, and 49% in SpA; 75%, 64%, and 51% in PsA, with no differences detected among the pathologies (p=0.96). Retention rates at 1, 3, and 5 years did not differ among the 3 anti-TNFs either for all pathologies included (ETN: 80%, 57%, and 43%; ADA: 80%, 58%, and 51%; IFX 72%, 56%, and 52%; p=0.75) or each pathology alone (**RA**: ETN: 83%, 55%, and 41%; ADA: 83%, 51%, and 51%; IFX: 76%, 44%, and 44%, p=0.84; **SpA**: ETN: 78%, 57%, and 48%; ADA: 78%, 59%, and 46%; IFX: 68%, 55%, and 52%, p=0.81; **PsA**: ETN: 70%, 60%, and 36%; ADA: 79%, 69%, and 69%; IFX: 80%, 66%, and 53%, p=0.65). Overall, 89 RA, 85 SpA, and 28 PsA patients discontinued treatment for inefficacy (32%) or side effects (SE, 9%)). In RA, predictors for treatment discontinuation were: Disease activity (DAS 28 ESR HR: 1.27 [1.05–1.55]; DAS28-CRP HR: 1.27 [1.03–1.60]), (CRP HR: 1.01 [1.01–1.02]), and corticosteroid intake (HR: 2.05 [1.027–3.32]). Concomitant methotrexate intake tended to decrease the treatment discontinuation risk (HR: 0.64 [0.41–1.01)]. Predictors for treatment discontinuation due to inefficacy were similar (DAS28 ESR, HR: 1.31 [1.05–1.63]; DAS28 CRP, HR: 1.33 [1.04–1.72], CRP HR: 1.02 [1.01–1.03]), corticosteroid intake HR: 3.79 [2.02–7.11]). We were unable to identify any predictors for treatment discontinuation due to SE, though corticosteroid intake was found to be protective (HR: 0.23 [0.07–0.71]). In SpA, the sole predictor for treatment discontinuation identified was increased BASDAI score (HR: 1.02 [1.01–1.04]), while the sole predictor for treatment maintenance was inflammatory syndrome (CRP HR: 0.97 [0.95–0.99]. Similar findings were seen for treatment discontinuation due to inefficacy (BASDAI HR: 1.03 [1.01–1.05)]; CRP HR: 0.98 [0.96–0.99]). We were unable to identify any predictors for treatment discontinuation due to SE. In PsA, active smoking was revealed to be a predictor for treatment discontinuation due to inefficacy (HR: 2.234 [1.02–4.91)].
Conclusions: ETN, ADA, and IFX display similar treatment retention rates in RA, SpA, or PsA without between-agent differences.
Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2018-eular.5086

AB1334 EVALUATION OF DYNAMICS OF MORTALITY FROM DISEASES OF THE BONE-MUSCULAR SYSTEM IN KARAKALPAKSTAN

M. Salokhiddinov, U. Anarmetova, G. Haydarova. *TASHKENT MEDICA ACADEMY, Tashkent, Uzbekistan*

Background: Karakalpakstan is now mostly desert and is located in western Uzbekistan near the Aral Sea, in the lowest part of the Amu Darya basin. The desertification of the Aral Sea has brought a lot of dust in the air, and respiratory diseases – bone-muscular diseases – have become the largest local health problem among the population of Karakalpakstan, a region in the North Western part of Uzbekistan.
Objectives: To asses of the dynamics of mortality trends from diseases of bone-muscular system (BMS) in the Karakalpakstan region in 2010–2015
Methods: To study mortality from BMS, databases on mortality of residents in Karakalpakstan for 2010–2015, obtained with the help of an automated mortality registration system, were used to automatically code and select the original cause of death in accordance with the rules of ICD-10.
Results: In the Karakalpakstan region, there has been a trend of a significant increase in mortality from BMS from 3.0 in 2010 to 5.6 per 1 00 000 in 2015 (1.9 times), with a slight decrease in the death rate from the BMS in Uzbekistan from 1.7 in 2010 to 1.6 in 2015 per 100 thousand people (the rate of decline is 5.9%). So that Decrease in the mortality rate from diseases of the musculoskeletal system in Uzbekistan from 1.7 to 1.6 per 100 thousand of population (the rate of decrease is 5.9%) and the growth of mortality rates from diseases of the musculoskeletal system was 1.9 times from 2001 to 2015
Conclusions: The growth of mortality rates from musculoskeletal system diseases in the Karakalpakstan region is not related to the rates of overall mortality of the population, but is more reliable due to the use of the automated system for recording mortality, as well as training physicians to codify medical and statistical diagnoses.

REFERENCES:
[1] Wolfe F, Michaud K, Gefeller O, et al. Predicting mortality in patients with rheumatoid arthritis. Arthritis & Rheumatism. 2003;48(6):1530–1542
[2] Wolfe F, Ross K, Hawley DJ, et al. The prognosis of rheumatoid arthritis and undifferentiated polyarthritis syndrome in the clinic: a study of 1141 patients. Journal of Rheumatology 1993;20(12):2005–2009.

Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2018-eular.2152

AB1335 SERUM MMP-3 IS CLOSELY RELATED TO KNEE JOINT SYMPTOMS IN RHEUMATOID ARTHRITIS PATIENTS: A CROSS-SECTIONAL STUDY FROM KURAMA COHORT

M. Azukizawa[1], H. Ito[1], K. Nishitani[1,2], K. Murata[1,2], A. Okahata[1], T. Tomizawa[1], M. Hashimoto[2], M. Tanaka[2], T. Mimori[3], S. Matsuda[1]. [1]*Department of Orthopaedic Surgery*; [2]*Department of Advanced Medicine for Rheumatic Diseases*; [3]*Department of Rheumatology and Clinical Immunology, Kyoto University Graduate School of Medicine, Kyoto, Japan*

Background: Joint damage progression occurs within the first 2 years of rheumatoid arthritis (RA).[1] Large joints are often involved in RA patients. The knee joint, in particular, is affected in about 30% of RA patients.[2] Knee joint disability in RA is thought to be one of the most important prognostic factors decreasing quality of life. However, few studies have focused on what would influence knee joint function in RA patients. Therefore, a cross-sectional study on this subject was