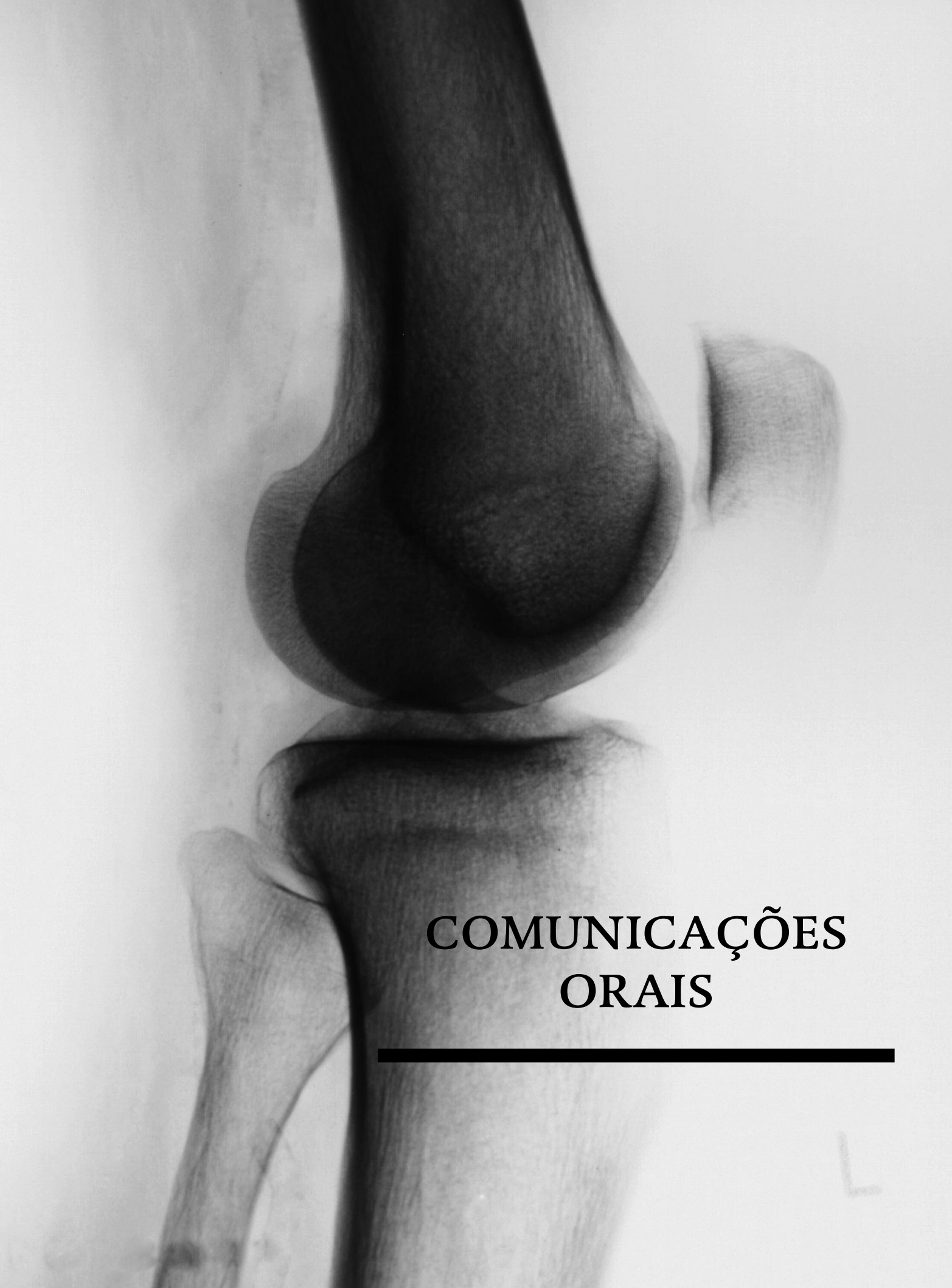

COMUNICAÇÕES ORAIS

Comunicações orais

ACTA REUMATOL PORT. 2016:41:31-52 (SUP)

C075 – PATIENT GLOBAL ASSESSMENT IN RHEUMATOID ARTHRITIS CONVEYS A VARIABLE BLEND OF DISEASE ACTIVITY AND DISEASE IMPACT: A CROSS-SECTIONAL STUDY WITH 311 PATIENTS

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Background: Patient global assessment (PGA) is a key outcome measure in rheumatoid arthritis (RA) and the sole patient-reported outcome included in measures currently used to guide treat-to-target (T2T) strategies. However, it is still not clear which concepts it conveys and how appropriate they are to guide therapy.

Objectives: to explore the meaning of PGA in RA patients, namely the influence of disease activity, disease impact, comorbidities, and psychological aspects.

Methods: This was an observational, cross-sectional study including consecutive RA patients (ACR/EULAR 2010 or ACR 1987 criteria) followed in a tertiary rheumatology outpatient department. Data collection included PGA (100mm VAS), pain and fatigue (0–10 NRS), Health Assessment Questionnaire (HAQ), Functional Assessment of Chronic Illness Therapy (FACIT), Hospital Anxiety and Depression Scale (HADS), Happiness Subjective Scale (HSS), and Ten Item Personality Inventory (TIPI). Demographic data, comorbidities, and disease activity [tender joint (TJC28) and swollen joint counts (SJC28), erythrocyte sedimentation rate (ESR) and C-reactive protein (CRP)] were also collected. Disease activity categories were defined as: 1) remission (ACR/EULAR 2011 boolean-based definition), 2) near-misses (only PGA>1), and 3) non-remission. Univariate (Pearson correlation, student's *t* test and One Way ANOVA) and multivariable analyses (linear regression, with stepwise methods and assessment of multicolinearity) were performed to explain PGA.

Results: 311 patients were included (82% females, 60±12 years, 11±9 years of disease duration, 8±5 years of formal education and a mean DAS(28)CRP4v= 2.9±1.2). All comorbidities assessed were associated with statistically (p<.05) higher PGA than RA alone

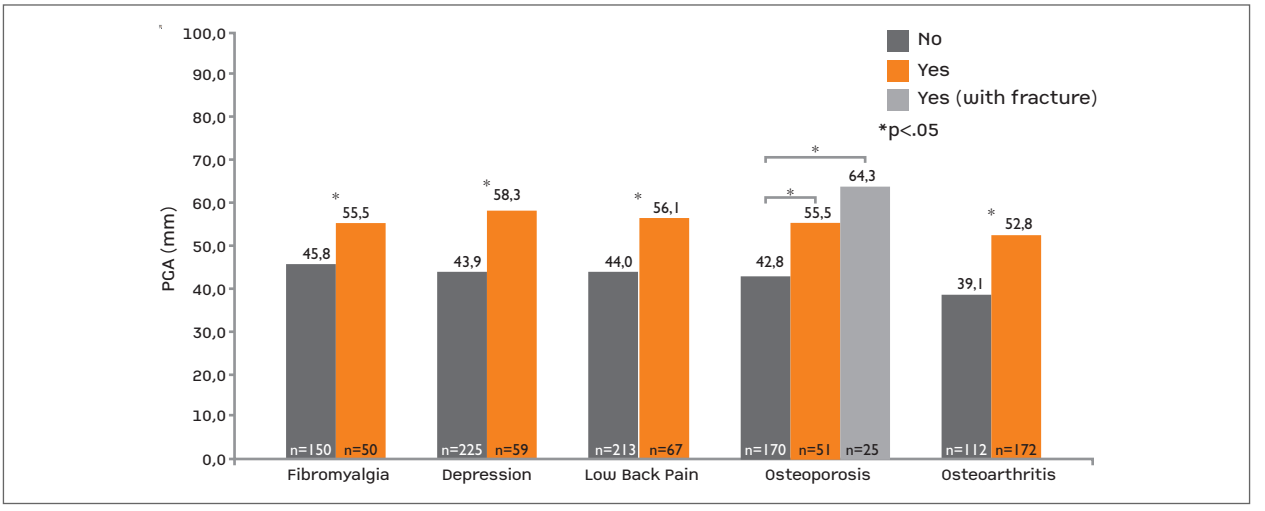

FIGURE 1. Patient Global Assessment in RA patients with and without comorbidities

TABLE I. MULTIVARIABLE LINEAR REGRESSION MODELS (STEPWISE-BACKWARD METHOD) TO EXPLAIN PGA IN RA PATIENTS

	Patients			
	All (n=284)	Remission (n=28)	Near-misses (n=107)	Non-remission (n=149)
Variable		β adjusted*		
Pain	0.29	0.62	0.25	0.34
Fatigue	0.17		0.27	
HAQ	0.30		0.21	0.36
HADS-Anxiety	0.18		0.19	0.27
SJC28	0.10			0.15
TJC28		0.33		
CRP				
R2 adjusted:	0.62	0.49	0.48	0.63

*all with p<.05

(Figure 1).

PGA was statistically correlated with all predictor variables, except for the personality domain "agreeableness". In multivariable analysis, PGA was explained ($R^2_{adj.}$=.6258) by pain (β=.2933), fatigue (β=.1723), function (β=.3021), anxiety (β=.183), and SJC28 (β=.1009). The predictors of PGA were different between disease activity categories (Table 1).

Conclusions: PGA does not only convey the inflammatory activity of the disease but also pain (of whatever musculoskeletal origin), fatigue, functional capacity, and psychological variables. These predictors present different relative impacts in different disease activity categories. In near-misses, the group where PGA is decisive for T2T, PGA is determined by fatigue, pain, function and anxietyTJC28 and negatively associated with CRP.

Including PGA in composite indices drifts these measures away from strict disease activity representation. This may negatively affect the adequacy of target-driven decisions regarding immunosuppressive therapy, inherently designed to control inflammation.

C0131 – TRIPLE POSITIVITY IS A RISK FACTOR FOR RECURRENT THROMBOSIS IN YOUNG PATIENTS WITH PRIMARY ANTIPHOSPHOLIPID SYNDROME

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Background: Recurrence of thrombosis during the follow-up of patients with Primary Antiphospholipid Syndrome (PAPS) is a major event yielding to poor prognosis. The identification of risk factors for recurrence is crucial to improve treatment strategies for secondary prophylaxis[1].

Objectives: To determine the risk factors for rethrombosis in patients with PAPS by investigating clinical features, traditional cardiovascular risk factors, the profile of antiphospholipid antibodies (aPL) and treatment options.

Methods: Retrospective analysis of a monocentric cohort of patients with thrombotic PAPS defined according to the updated Sapporo Criteria. aPL were determined by Lupus Anticoagulant (LA), anti-cardiolipin (aCL) IgG/IgM and anti-ß2glycoprotein I (anti-ß2GPI) IgG/IgM. A positive result by all 3 assays was defined as triple positivity. Patients were grouped by the number of events (single-S or recurrent–R). Comparisons between groups were performed using chi square test for categorical variables and Mann-Whitney test to continuous variables. Multivariate logistic regression analysis was used to identify independent determinants of R events. Variables identified as having p-value < 0.1 in univariate analysis were included. P-values < 0.05 were considered statistically significant. Data was analyzed using SPSS® version 21 for windows.

Results: The study included 162 PAPS patients (118 fe-

TABLE I. CLINICAL AND LABORATORY CHARACTERISTICS OF PATIENTS WITH PAPS

	Single (n=109)	Recurrent (n=53)	p
Demography	47,8 (37,6-56,9)	54,5 (42,7-65,7)	NS
Age at last visit, median (25th, 75th percentile) years	34,0 (24,0-45,5)	42,0 (31,0-53,0)	NS
Age at last first event, median (25th, 75th percentile) years	79 (73%)	39 (73%)	NS
Sex, no. female	89,9 (42,2-169,9)	108,5 (35,3-174,3)	NS
Disease duration, median (25th, 75th percentile) months			
Clinical features			
Thrombosis (first event)			
Arterial	39 (36%)	20 (38%)	NS
Venous	70 (64%)	33 (62%)	NS
Thrombotic risk factors			
Cardiac disease	23 (21%)	23 (43%)	0,007
Arterial hypertension	23 (21%)	22 (42%)	0,016
Untreated hypertension	32 (29%)	22 (42%)	NS
Diabetes mellitus	3 (3%)	4 (7%)	NS
Obesity Smoking	23 (21%)	13 (24%)	NS
Smoking	37 (34%)	13 (25%)	NS
Hypercholesterolomia	34 (31%)	17 (32%)	NS
Hypertriglyceridemia	10 (9%)	6 (11%)	NS
Hyperhomocysteinemia	26 (24%)	12 (23%)	NS
Inherited thrombophilia	36 (33%)	16 (30%)	NS
Laboratory profile			
LA	68 (62%)	44 (83%)	0,008
Isolated LA	6 (5%)	4 (7%)	NS
aCL IgG	72 (66%)	36 (68%)	NS
aCL IgM	82 (75%)	38 (71%)	NS
β2GPI IgG	82 (75%)	38 (72%)	NS
β2GPI IgM	66 (61%)	41 (77%)	0,034
Single positivity	24 (22%)	8 (15%)	NS
Double positivity	36 (33%)	11 (21%)	NS
Triple positivity	48 (44%)	34 (64%)	0,016

male, median age 48 years, venous thrombosis, VT in 103, arterial thrombosis, AT in 59). During the follow-up (median 93 months) 70 recurrences were observed in 53 patients (VT in 36, AT in 34). Clinical and laboratory characteristics of patients are summarized in the table. Anticoagulation withdrawal or poor control of anticoagulation intensity was identified in 28% of the patients that experienced a recurrence. Patients with rethrombosis more frequently had cardiac disease (hypertensive cardiopathy, valvular dysfunction, patent foramen ovale) (43% vs 21% p=0.007) and arterial hypertension (53% vs 33% p=0.01). Recurrent events were significantly associated with triple positivity (64% vs 44% p=0.01), LA (83% vs 62% p=0.008) and IgM anti-ß2GPI (77% vs 60% p=0.03). Patients with rethrombosis less frequently received hydroxychloroquine (11% vs 41% p<0.0001), oral anticoagulation (19% vs 46% p=0.009) and anti-platelet treatment (37% vs 59% p=0.0009). The logistic regression analysis showed that the variables that remained significant were triple positivity (OR 3.57 95% CI 1.32-9.65), cardiac dysfunction (OR 3.51 95% CI 1.35-9.15), hydroxychloroquine use (OR 0.22 95% CI 0.08-0.64), oral anticoagulation (OR 0.06 95% CI 0.02-0.24) and anti-platelet treatment (OR 0.01 95% CI 0.03-0.34). Triple aPL positivity was also significantly more frequent in younger patients (under 50 years, n=118) who had recurrent events (71% vs 51% p=0.05), while no differences were found in terms of traditional cardiovascular risk factors.

Conclusions: Patients with PAPS developed recurrence of thrombosis despite treatment in one third of cases. Triple positivity conferred a more severe risk of

rethrombosis in PAPS patients irrespective of traditional risk factors.

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C0187 – INTERSTITIAL LUNG DISEASE IN SCLERODERMA PORTUGUESE PATIENTS

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Background: Systemic sclerosis (SSc) is a rheumatic disorder characterized by inflammation and fibrosis involving the skin as well as internal organs, including the lung.
Objectives: This study was conducted to characterize SSc patients with ILD and determine predictor features for the presence of ILD.
Methods: A retrospective evaluation of SSc patients from our Rheumatology department was undertaken. ILD was defined according to imaging findings in high-resolution CT (HRCT) combined with functional parameters. Demographic features, auto-antibodies, spirometry, diffusion capacity for carbon monoxide (DLCO) measurement, echocardiography and 6-minute walk test were compared between groups with and without ILD using parametric tests and non-parametric tests. Predictor factors were established by logistic regression analyses.
Results: One hundred and three SSc patients with current mean age of 60.2±14.1y and mean disease duration of 10.0±9.6y were evaluated. Thirty-four (35.8%) patients were diagnosed with ILD, of whom 13 had limited cutaneous SSc, 14 had diffuse cutaneous SSc, 2 sine sclerodema and 5 overlap syndroms. ANA was positive in 100% cases, anti-Scl70 was found in 55% and anti-centromere antibody positivity was found in 15% of patients. HRCT revealed diffuse parenchymal lung disease involvement > 20% in 18(53%) cases, with the majority showing a predominant honeycombing pattern. Spirometry showed a restrictive pattern in 8 patients and 1 had obstruction. The DLCOsb was abnormal in 7 patients. Three patients had pulmonary hypertension confirmed by right heart catheterization, 2 patients classified as group 1 and 3 and 1 patient of group 5. About 63% of ILD patients were ever treated with corticosteroids and 27% with cyclophosphamide, which were the most common drugs used. Two patients were also treated with rituximab. In this ILD-group, 5 deaths were recorded, 2 due to cancer, 1 abdominal sepsis, 1 pulmonary hypertension and 1 of unknown cause. Comparison of these ILD patients with non-ILD patients revealed some significantly differences (Table 1).

Multivariate analysis showed that digital ulcers (OR=31.6, 95% CI 3.09 to 321.91), Anti-Scl70 antibody positivity (OR=10.1, 95% CI 1.19 to 85.74) and anti-centromere antibody negativity (OR=0.08, 95% CI 0.01 to 0.83) were independently associated with

TABLE I. STATISTICALLY SIGNIFICANT DISTINCTIONS BETWEEN PATIENTS WITH AND WITHOUT ILD

	ILD patients (n=34)	No-ILD patients (n=61)	P
Current mean age(years)	61.8 ± 14.5	58.6 ± 13.2	0.330
Mean disease duration(years)	11.6 ± 9.8	9.2 ± 9.3	0.250
Anti-centromere antibody(%)	5 (15)	48 (79)	<0.001
Anti-Scl70 antibody(%)	18 (55)	4 (7)	<0.001
Diffuse cutaneous disease(%)	14 (41)	5 (8)	<0.001
Digital ulcers(%)	19 (54)	11 (18)	<0.001
NYHA Functional Classification(%)	23 (67)	30 (49)	0.017
Tricuspid regurgitation(%)	26 (84)	24 (45)	0.001
DLCOsb <60(%)	7 (64)	0 (0)	0.056
Hypoxemia at rest(%)	8 (27)	4 (7)	0.013
Gastrointestinal involvement(%)	10 (48)	9 (24)	0.060
Death(%)	5 (16)	1 (2)	0.020

the presence of ILD.
Conclusions: This study is one of the first studies carried out in Portugal regarding lung involvement in SSc. About one third of the patients had ILD, whose main characteristics are in accordance with other European cohorts. We confirmed that anti-SCL70 positivity, presence of digital ulcers as well as the absence of anti-centromere antibody is independently associated with ILD.

CO6 – EFFECT OF COMEDICATION WITH CONVENTIONAL SYNTHETIC DMARDS ON RETENTION OF TNF INHIBITORS IN PATIENTS WITH SPONDYLOARTHRITIS: A PROSPECTIVE COHORT

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Background: The effects of comedication with conventional synthetic disease modifying antirheumatic drugs (csDMARDs) on TNF inhibitors (TNFi)-retention in spondyloarthritis (SpA), are inconclusive. Results from previous observational studies may have easily led to spurious conclusions, since confounding, especially 'confounding by indication', was not fully addressed.
Objective: To evaluate if comedication with csDMARD influences TNFi-retention in patients with SpA, while performing a comprehensive set of adjustments to best

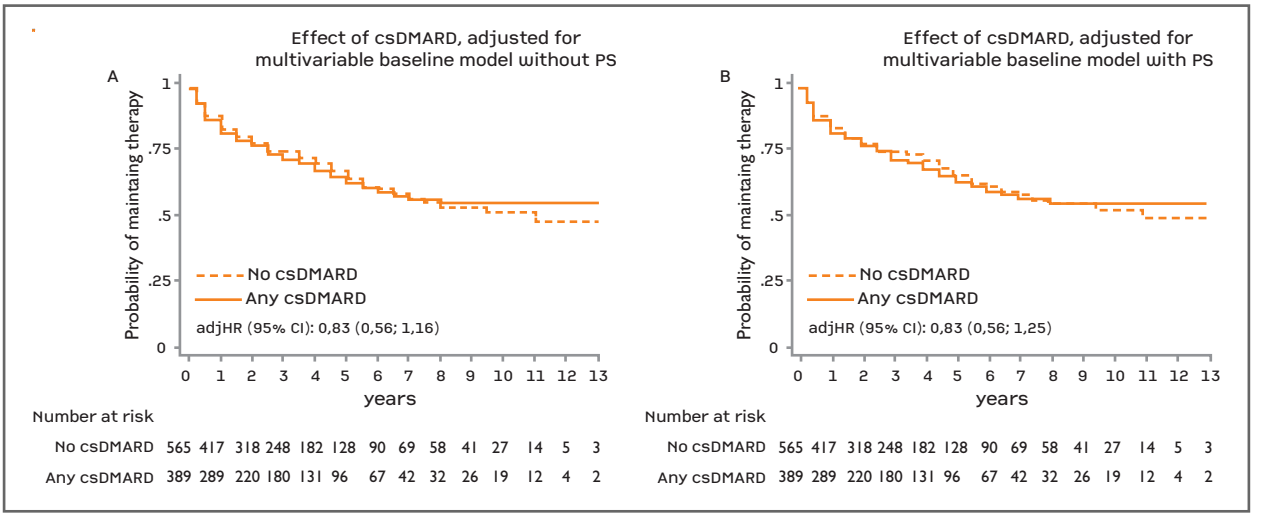

FIGURE.

handle confounding.
Methods: Patients with SpA (according to their treating rheumatologists) from the Rheumatic Diseases Portuguese Register (Reuma.pt), with first TNFi started between 2001 and 2014 were included in this prospective, multicenter, cohort study. Our main outcome was time to first TNFi discontinuation. Cox-regression was used to estimate the effect of csDMARD comedication on TNFi-retention in two types of models, one including baseline (time-fixed) variables and the other with time-varying variables, including socio-demographic features, measures of disease activity, physical function and co-treatment with other drugs (NSAIDs and oral steroids). To control for possible 'confounding by indication', the effect of csDMARD comedication on TNFi--retention was also tested after propensity score (PS)-adjustment.
Results: In total, 954 patients (mean (SD) age 41.5 (12.0) years; 59.6% males; 13.7 (10.4) years of disease duration) were included and 289 (30.3%) discontinued their first TNFi after a median follow-up time of 2.5 years (range: 0.08-13 years). A large proportion of patients were treated with csDMARDs at baseline (389; 41%). Inefficacy was the most common reason for TNFi discontinuation (55.7%), followed by adverse events (31.1%). In the multivariable analysis comedication with csDMARDs had no effect on TNFi-retention, neither in the baseline model (HR: 0.83; 95% CI: 0.59; 1.16) (figure A) nor during follow-up adjusting for time-varying covariates (HR: 1.13; 95% CI: 0.71; 1.80). The effect of csDMARDs remained not statistically significant after PS-adjustment (figure B).
Conclusion: Comedication with csDMARDs does not prolong TNFi-retention in SpA patients in clinical practice suggesting no benefit in the concomitant use of these drugs.

C012 – PERFORMANCE OF THE ASAS CLASSIFICATION CRITERIA FOR AXIAL AND PERIPHERAL SPONDYLOARTHRITIS – A SYSTEMATIC LITERATURE REVIEW AND META-ANALYSIS

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Background: The Assessment of SpondyloArthritis International Society (ASAS) has developed and validated classification criteria for axial spondyloarthritis (axSpA) and peripheral SpA (pSpA). Following their release, the ASAS criteria have been 'challenged' in different cohorts, thus warranting a review of the so-far ac-

TABLE I. RESULTS OF META-ANALYSIS

	Number of studies	Number of patients	LR + (95%CI)	LR – (95%CI)	Sensitivity (95%CI)	Specificity (95%CI)
ASAS SpA criteria	2	1,750	6.3 (3.2;12.4)	0.31 (0.13;0.70)	0.73 (0.47;0.89)	0.88 (0.81;0.93)
ASAS pSpA criteria	3	749	4.7 (3.5;6.3)	0.43 (0.30;0.62)	0.62 (0.47;0.76)	0.87 (0.81;0.91)
ASAS exSpA criteria	6	4,293	6.9 (3.8;12.4)	0.19 (0.15;0.27)	0.82 (0.76;0.87)	0.88 (0.79;0.94)
axSpA criteria imaging arm +/- clinical arm	5	3,426	13.6 (4.8;38.7)	0.45 (0.37;0.56)	0.57 (0.47;0.66)	0.96 (0.88;0.99)
axSpA criteria clinical arm +/- imaging arm	5	3,426	6.0 (2.9;12.4)	0.56 (0.43;0.72)	0.49 (0.34;0.64)	0.92 (0.82;0.96)
axSpA criteria (imaging arm only)	5	3,426	9.6 (4.4;20.7)	0.72 (0.59;0.88)	0.26 (0.16;0.40)	0.97 (0.94;0.99)
axSpA criteria (clinical arm only)	5	3,426	4.5 (2.3;8.8)	0.81 (0.72;0.91)	0.23 (0.17;0.29)	0.94 (0.89;0.96)

cumulated evidence on the criteria validity and applicability.
Objective: To summarize the evidence on the performance of the ASAS classification criteria for axSpA (also imaging and clinical arm separately), pSpA and the entire set of SpA, when tested against the Rheumatologist's diagnosis ('reference standard').
Methods: A systematic literature review was performed to identify eligible studies. Only studies with full-text available were included and, thereafter, raw data was obtained from the authors of the selected publications. A meta-analysis was performed to obtain pooled estimates for sensitivity, specificity, positive (LR+) and negative (LR-) likelihood ratios, by fitting random effects models. With a series of sensitivity analyses we assessed the possible effects of: i) target population (original validation study inclusion criteria vs different inclusion criteria); iii) setting (hospital vs community); and iii) disease duration (< 2 years vs = 2 years).
Results: Of the 1,647 retrieved articles, 8 fulfilled the inclusion criteria (N=5,042 patients). The entire set of the ASAS SpA criteria yielded a high pooled sensitivity (73%) and specificity (88%), but with limited available data (Table). Similarly good results were found for the axSpA criteria (sensitivity: 82%; specificity: 88%) in a larger number of studies. Splitting the axSpA criteria in 'imaging arm only' and 'clinical arm only' resulted in much lower sensitivity (30% and 23% respectively) but retaining very high specificity (97% and 94% respectively). The 'imaging arm only' compared to the 'clinical arm only' had a much higher LR+ (9.6 vs 4.5, respectively). The pSpA criteria were less tested than the axSpA and have shown a similarly high pooled specificity (87%) but lower sensitivity (63%). Sensitivity analyses yielded consistently good results for the axSpA criteria (sensitivity (range): 78%-86%; specificity (range): 86%-93%). For pSpA there were few studies therefore hampering sensitivity analyses.
Conclusions: Accumulated evidence from more than 5,000 patients confirms the good performance of the various ASAS SpA criteria as tested against the Rheumatologist's diagnosis. The clinical and imaging arm have high specificity but lack sensitivity if applied separately, indicating that the full set of axSpA criteria is the preferred set.

C018 – PREDICTORS OF RESPONSE TO TNF-A BLOCKERS IN PATIENTS WITH POLYARTICULAR PSORIATIC ARTHRITIS

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Introduction: Psoriatic arthritis (PsA) is a chronic inflammatory rheumatic disease affecting both the skin and the joints. TNF-a blockers (adalimumab, etanercept, golimumab and infliximab) were a breakthrough development in the treatment of PsA. Identifying predictors of response to TNF-a blockers in patients with PsA is of utmost importance, especially in view of the costs and potential side effects of these agents.
Objectives: The aim of the present study was to determine baseline predictive factors of response to TNF-a blockers at 3 and 6 months, in PsA patients with polyarticular involvement (with or without axial involvement).
Methods: Data were collected from the Rheumatic Diseases Portuguese Registry (Reuma.pt). Eligible PsA patients were TNF-a blockers naive at baseline and had at least 3 months of follow up, after the beginning of TNF-a blockers therapy. Patients with oligoarticular or mutilant forms of PsA were excluded. Only patients with information on at least one of the response measures (EULAR good clinical response, EULAR good/moderate response, DAS28-3V-ESR remission and HAQ response) at 3 or 6 months of follow-up were included in the analysis.

Univariable logistic regression analyses of potential baseline predictors of EULAR good clinical response, EULAR good/moderate response, DAS28-3V-ESR remission and HAQ response (achievement of a HAQ =0.5 and/or a decrease in the HAQ =0.22) were performed. Variables with a p-value<0.05 were re-tested in multivariable models. Forward selection was performed until the best-fit model was obtained, taking confounding effects into account.
Results: A total of 180 patients were eligible for the study (mean age 52 years, 54% women). At 3 months, females were less likely to attain a good EULAR response and this type of response was also positively as-

sociated with disease duration until the first biologic. Achieving moderate/good EULAR and HAQ responses as well as a DAS28-3V-ESR remission was also less probable in females and the later was negatively associated with higher ESR at baseline.

At 6 months, a good EULAR response was inversely associated with both female gender and higher tender joint count at baseline. DAS28-3V-ESR remission was less probable in females and it was negatively associated with higher DAS28-3V-ESR at baseline. A moderate/good EULAR response was only positively associated with methotrexate intake. HAQ response was also less probable in females. The results of the multivariable analysis are reported in Table I.

Conclusion: In this study we found that gender was the most consistent predictor of response of anti-TNFa therapy in patients with polyarticular PsA, with males having a higher probability of response compared to females. These findings suggest that gender-associated biochemical, hormonal and psychological factors could play an important role on the response to anti-TNFa therapy in PsA.

C0254 – ASSOCIATION BETWEEN ENTHESITIS CHANGES AND CARDIOVASCULAR RISK IN PSORIATIC ARTHRITIS PATIENTS

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Background: Psoriatic arthritis (PsA) patients are at increased risk of cardiovascular (CV) events compared to general population[1,2]. Enthesitis is a hallmark of PsA,

TABLE I. RESULTS OF THE MULTIVARIABLE ANALYSES FOR ALL OUTCOMES AT 3 AND 6 MONTHS

	3 months			
	Good EULAR response	**DAS28-3V-ESR remission**	**Moderate or good EULAR response**	**HAQ response**
Female gender, OR (CI), p-value	0.082 (0.024,0.278), p<0.001	0.083 (0.017, 0.416), p=0.002	0.091 (0.011, 0.091), p=0.024	0.074 (0.009, 0.608), p=0.015
DDFB, OR (CI), p-value	1.091 (1.026, 1.159), p=0.005			
Higher ESR at baseline, OR (CI), p-value		0.935 (0.891, 0.982), p=0.007		
	6 months			
Female gender, OR (CI), p-value	0.060 (0.011, 0.325), p=0.001	0.060 (0.012, 0.297), p=0.001		0.138 (0.029, 0.654), p=0.013
Higher TJC at baseline, OR (CI), p-value	0.892 (0.801, 0.992), p=0.036			
Higher DAS28-3V-ESR at baseline, OR (CI) , p-value		0.344 (0.133, 0.893), p=0.028		
MTX intake, OR (CI), p-value			4.667 (1.320, 16.497), p=0.017	

and it can be evaluated by ultrasound (US) with higher sensibility and specificity than clinical evaluation. Structural and inflammatory changes feasible to be evaluated by US are described by OMERACT consensus[3], and can be quantified by scores such as MASEI[4].

Objectives: To study the association between enthesitis changes, measured by MASEI, and cardiovascular risk in PsA patients.

Methods: PsA patients with peripheral joint involvement followed at a tertiary Hospital and consecutively observed in the outpatient clinic were included. Demographic and clinical data (age, gender, CV risk factors) were registered. Patients enthesic involvement was assessed by US using the MASEI score, and structural (strMASEI) and inflammatory (infMASEI) scores were stratified. The atherogenic index (AI) was calculated (AI=total cholesterol/HDL); CV risk was then estimated using the SCORE stratification table for low risk countries such as Spain (CVrSCORE). The vascular evaluation was performed in the extra cranial carotid artery, following the Mannheim consensus (5), with an Esaote MyLab xv70 ultrasound equipped with a 7--12 mHz linear transducer; an automated program assessed the intima-media thickness through radiofrequency (Quality intima media thickness in real time [QIMT]). Statistical analysis was performed using SPSS 17.0 software.

Results: Sixty-six patients were included, 41 (62.1%) women, with a mean age of 56.8 ± 11.9 years and a mean disease duration of 108.1 ± 102.5 months; 22 (33.3%) were smokers or past smokers; 19 (28.8%) were obese (average BMI of 27.8 ± 4.7 kg/m2); 56 (84.8%) were treated with methotrexate and 22 (33.3%) were on biological therapy. The mean MASEI score was 13 ± 9.7 (0-43); mean strMASEI and infMASEI scores were 9.3 ± 5.9 (0-27) and 3.7 ± 4.5 (0-22), respectively. The MASEI and the strMASEI scores correlated positively with age (r=0.31, p<0.05 and r=0.42, p<0.01, respectively).

CVrSCORE correlated positively with MASEI and strMASEI scores (p<0.05); however, after adjusting for age, this correlation didn't prevail. Greater MASEI and strMASEI scores were associated with the presence of atheroma plaque, after adjusting for confounding variables (age, genre and smoking status) (p<0.05); the QIMT correlated positively only with the infMASEI score, after adjusting for the same confounding variables (p<0.05).

Conclusions: Extensive enthesitis changes, which may represent accumulated damage in PsA patients, are associated with atherosclerotic vascular changes, both evaluated by US. It has been previously demonstrated in Rheumatoid Arthritis patients that CVrSCORE may underestimate the CV risk, when compared to US carotid changes (6); although no similar data exists for PsA patients, this could explain why in this study no significant association between enthesitis changes and the clinical CV risk estimation score was found.

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C0159 – YEARS OF WORKING LIFE LOST CAUSED BY RHEUMATIC DISEASES IN PORTUGAL – ANALYSIS FROM THE EPIREUMAPT STUDY

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Objectives: The aim of this study was to calculate the years of working life lost (YWLL) caused by rheumatic diseases (RD).

Methods: We used data from the cross-sectional, population-based EpiReumaPt study (Sep2011--Dec2013). 10,661 inhabitants were randomly surveyed to capture all cases of RD within a representative sample of the Portuguese population. We analyzed participants aged between 50 and 65 years old (yo), near the official retirement age. YWLL were determined for cases with premature retirement caused by RD (self--reported) estimated as the difference between each

participant's age and the respective retirement age ("observed stock"), while the potential YWLL (PYWLL: YWLL+"expected stock" of YWLL still to occur if there is no return-to-work) was the difference between official and actual retirement ages. We also calculated the percentage of time in inactivity (inactivity ratio = YWLL/Active age-range [15-65yo]). All results were based on weighted data.

Results: 3.9% (n=66,953/N=1,706,750) of the Portuguese population (50-64 yo) had premature retirement caused by RD. The mean age of early retirement caused by RD was 54.8 yo, which led to a total stock of 389,939 YWLL (228 per 1000 inhabitants). Women account for 85% of these YWLL. If all forms of exit from work are included this figure rises to 617,764 YWLL (disability: 121,323; unemployment: 106,502). A total number of 684,960 PYWLL were estimated (401/1000) if early retirement is considered and 1,186,679 PYWLL (695/1000) for all forms of exit from work. The mean YWLL and PYWLL inactivity ratios were 13% and 25%, respectively.

Conclusions: We observed a high stock of accumulated YWLL caused by RD in Portugal. Moreover, if nothing is done otherwise the amount of working life still to be lost from the current early retirees due to RD will almost equal those already gone, meaning that health policies should target not only job retention measures but also return-to-work ones.

CO219 – AUTOANTIBODIES AGAINST ΔI OF β2GLYCOPROTEIN I ARE A RISK FACTOR FOR FETAL DEATH IN PRIMARY ANTIPHOSPHOLIPID SYNDROME PREGNANCIES

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Introduction: History of thrombosis is an independent risk factor for adverse pregnancy outcomes (APO).Therefore, in patients with thrombotic Primary Antiphospholipid Syndrome(PAPS) obstetric risk stratification is particularly relevant.

Objectives: To determine the risk factors for adverse pregnancy outcome (APO) in patients with thrombotic PAPS by investigating clinical features, traditional cardiovascular risk factors, the profile of aPL and treatment options.

Methods: From a cohort of 162 thrombotic PAPS we selected two groups:1) women with first treated pregnancies that were prospectively followed in our center(n=34) 2)women with anamnestic untreated pregnancies(n=38).Group 2 was also selected upon a positive anti-β2glycoprotein I result obtained with our routine test. Patients were classified according to updated Sapporo Criteria.aPL were determined as Lupus Anticoagulant(LA),IgG/IgM anti-cardiolipin antibodies(aCL) and IgG/IgM anti-β2glycoprotein I antibodies(anti-β2GPI).A positive result by all 3 assays was defined as triple positivity. The detection of IgG antibodies against the domain I of β2GPI(anti-DI) was performed using the chemiluminescence immunoassay in BIOFLASH®system (INOVA Diagnostics,San Diego,CA,USA;cut-off 20CU). Patients with were grouped upon the presence or absence of APO. APO was defined as at least one of the followings: miscarriage (before 10thweek), foetal death (beyond 10thweek), severe preterm delivery (before 34thweek) and HELLP syndrome. Comparisons between groups were performed using chi square, Fisher's and Mann-Whitney test. The predictive value of anti-DI titres was performed using ROC analysis. P-values <0.05 were considered statistically significant.Data was analyzed using SPSS® version 21 for windows.

Results: Thirty four women with thrombotic PAPS were prospectively followed during pregnancy (median age 26 years, median follow-up 16 months, venous thrombosis VT-28, arterial thrombosis AT-6). Most of the patients (62%)were triple positive. Clinical, laboratory characteristics and treatment of the patients are summarized in the table. Nine women(26%) suffered from obstetric morbidity despite treatment.aPL profile was similar among the groups. Patients with APOs more frequently had hypercholesterolemia(56% vs 16% p=0,03), hypertriglyceridemia(33% vs 4% p=0,05) and hyperhomocysteinemia (56% vs 0% p<0,01).In group 2 (median age 22 years, VT-29, AT-9, 68% triple positive), 87% of women had history of APO. APOs were significantly associated with triple positivity (81% vs 27%p<0,01), LA (85%vs36% p<0,01), IgG aCL (77% vs 60%p=0.03), IgM aCL (18% vs 59%p=0,02) and anti-DI positivity (85% vs 18%p<0,001).History of fetal death was associated with anti-DI positivity (100% vs 55%p<0,001). Titres

TABLE I. CLINICAL, LABORATORY CHARACTERISTICS AND TREATMENT OF PATIENTS WITH PROSPECTIVELY FOLLOWED PREGNANCIES

	Pregnancies with APO (n=9)	Pregnancies without APO (n=25)	p
Demography			
Age at last visit, median (25th, 75th percentile) years	27,5 (23,0-30,6)	25,3 (22,5-34,3)	NS
Disease duration, median (25th, 75th percentile) months	14,5 (8,4-27,5)	17,1 (14,4-29,2)	NS
Clinical features			
Thrombosis (first event)			
Arterial	2 (22%)	4 (16%)	NS
Venous	7 (78%)	21 (84%)	NS
Thrombotic Risk Factors			
Arterial hypertension	2 (22%)	0 (6%)	NS
Diabetes mellitus	0 (0%)	0 (0%)	NS
Obesity	1 (11%)	7 (28%)	NS
Smoking	3 (33%)	4 (16%)	NS
Hypercholesterolemia	5 (56%)	4 (16%)	0,03
Hypertriglyceridemia	3 (33%)	1 (4%)	0,05
Hyperhomocysteinemia	5 (56%)	0 (0%)	0,001
Inherited thrombophilia	5 (56%)	7 (28%)	NS
History of obstetrical complications	8 (85%)	14 (56%)	NS
Laboratory Profile			
LA	8 (89%)	20 (80%)	NS
aCL IgG	7 (77%)	18 (72%)	NS
aCL IgM	6 (66%)	8 (32%)	NS
β2GPI IgG	9 (100%)	21 (84%)	NS
β2GPI IgM	7 (78%)	18 (72%)	NS
Single positivity	0 (0%)	2 (8%)	NS
Double positivity	3 (33%)	8 (32%)	NS
Triple positivity	6 (67%)	15 (60%)	NS
Treatment during Pregnancy			
LDA + LMWH	9 (100%)	20 (80%)	NS
LDA in single therapy	0 (0%)	5 (20%)	NS

of anti-DI were significantly higher in patients with history of fetal death (median 3867 vs 225,p<0.0001). The ROC analysis indicated a cut-off value of 1347 CU with 70 % sensitivity and 71 % specificity (AUC = 0.797 p <0,001) for fetal death prediction. In reverse, patients without APO presented lower anti-DI titres (46 vs 3489 p<0.0001).

Conclusions: Women with thrombotic PAPS are at risk of pregnancy complications. When treated, pregnancy was successful in two-thirds of the cases. The aPL profile (including anti-DI) can help to identify women at higher risk, but also traditional vascular risk factors must be included into risk stratification in order to identify women who deserve a more aggressive treatment.

C025 – PERFORMANCE OF THE EULAR/ACR 2013 CLASSIFICATION CRITERIA IN A PORTUGUESE SYSTEMIC SCLEROSIS POPULATION

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Background: The 1980's ACR classification criteria for systemic sclerosis (SSc) show low sensitivity, especially in early or mild forms. A new set of classification criteria has been developed by ACR/EULAR in 2013. Applicability of the new criteria in clinical practice remains to be shown.
Objectives: To evaluate the performance of both set of classification criteria for SSc in a Portuguese SSc population.
Methods: Cross-sectional study including consecutive patients with clinical diagnose of SSc (based on expert opinion) followed in our rheumatology department. Clinical and demographic characteristics were collected by consulting the clinical files and national data base – Reuma.pt. The two sets of criteria were applied to all patients, sensitivity was calculated and Kappa coefficient was used to evaluate the agreement between them. Patients not fulfilling the old but fulfilling the new criteria were compared with those that fulfilled ACR criteria using Mann-Whitney, qui-square and fisher test (SPSS 23.0). Significance level was set as <0.05.
Results: 108 patients were included, 96 (88.9%) were female with mean age of 58.21 (±12.8) years and a median disease duration of 6 years (0-38). 96 (88.9%) had localized and 12 (11.1%) had diffuse disease form. The most prevalent criteria items were: Raynaud's phenomenon (93.5%), sclerodactyly of the fingers (85.2%) and antinuclear antibodies (94.4%).

For overall cohort, 53 patients (49.1%) fulfilled the old ACR criteria. These 53 patients and more 44 patients (97) fulfilled the new ACR/EULAR criteria, showing a sensitivity of 89.9% compared to 49.1% of the old ones. Kappa coefficient was 0.197 (p=0.01).

In patients with localized forms, the sensitive of ACR/EULAR criteria was 88.5% compared with 43.8% of ACR 1980 criteria and Kappa coefficient was 0.183 (p=0.02).

In diffuse forms, all 12 patients fulfilled both criteria set, showing an almost perfect agreement.

Patients not fulfilling the old but fulfilling the new criteria presented more frequently with capillaroscopic abnormalities (p=0.04) and anticentromere antibody (p=0.01), but low incidence of anti-Scl70 antibodies (p<0.001) and interstitial lung disease (p<0.001).

Conclusions: Our study confirmed a greater sensibility of the new ACR/EULAR 2013 criteria compared with ACR 1980 criteria, especially in mild and localized SSc disease forms. In our patients with SSc not fulfilling the old criteria, the presence of capillaroscopic abnormalities and anticentromere antibodies among the new set of classification criteria were of the utmost importance in their reclassification as SSc patients. The application of the new criteria in clinical scenario allows an early classification and timely management of more SSc patients, ensuring a better prognosis.

C053 – ESCLEROSE SISTÉMICA DE LONGA DURAÇÃO – PRECISAMOS DE UMA RECLASSIFICAÇÃO DOS PADRÕES CAPILAROSCÓPICOS. UM ESTUDO MULTICÊNTRICO

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Introdução: A Esclerose Sistémica (ES) é uma doença em que o envolvimento microvascular desempenha um papel crucial na sua fisiopatologia. Como processo dinâmico, a expressão microvascular desta vasculopatia pode ser classificada na capilaroscopia periungueal (CAP) em padrões que são típicos da ES: 1) "padrão precoce"; 2) "padrão ativo" e 3) "padrão tardio". Os resultados de alguns estudos sugerem que um grupo de doentes com ES de longa duração não progride para um "padrão de tardio", mas parece estabilizar num padrão menos evoluído.

Objetivos: Avaliar o padrão capilaroscópico em doentes com ES de longa evolução e as suas associações com as características da doença.
Métodos: Estudo multicêntrico, retrospectivo, envolvendo doentes com o diagnóstico de ES (critérios de classificação ACR / EULAR 2013), com pelo menos uma das seguintes condições: duração = 20 anos de fenómeno de Raynaud (FR) ou = 15 anos de uma manifestação de ES (não FR). Os dados de capilaroscopia foram recolhidos por um microscópio estereoscópico (ampliação 10-100 x) e / ou por videocapilaroscopia (ampliação 200 x). Correlação do padrão de CAP com o envolvimento de órgãos (pele, hipertensão pulmonar (HP), doença pulmonar intersticial (DPI)) e com o perfil de auto-anticorpos. A análise estatística foi realizada usando SPSS versão 17.0, aplicando o teste do qui-quadrado, t de Student e Wilcoxon, para significância estatística de <5%.
Resultados: No total, 95 doentes foram incluídos, com idade média de 63,7 ± 11,3 anos, 94% eram do sexo feminino. A duração da doença foi de 18,3 ± 7,0 anos (primeira manifestação não FR) e 26,1 ± 8,2 anos (FR). As alterações na última CAP, realizada em média 24,7 ± 7,3 anos após o início do FR, foram: 51,6% (hemorragias), 83,2% (dilatação capilar), 89,5% (megacapilares), 52,6% (áreas avasculares) e 46,3 % (neovascularização). Observou-se que 47,4% dos doentes apresentavam um "padrão estável" (não evoluindo para o "padrão tardio"). Os doentes que preenchiam os critérios ACR 1980 apresentaram mais frequentemente um "padrão tardio" (76% *vs.* 44,4%, p = 0,003). Comparando com o "padrão estável", o "padrão tardio" relacionou-se de forma estatisticamente significativa com a presença de Scl70 (32% *vs.* 11,1%, p = 0,024), Score de Rodnan modificado> 10 (62% *vs.* 11,1%, p <0,0001), DPI (62% *vs.* 35,6%, p = 0,014), redução na DLCO (52% *vs.* 13,3%, p <0,0001) e com o uso de terapia imunossupressora (60% *vs.* 20%, p <0,0001). Não houve diferenças significativas entre os grupos quanto à idade, duração do FR, duração da primeira manifestação não FR, tempo de capilaroscopia e presença de HP.
Conclusão: Uma proporção significativa de doentes com longa duração de ES não evolui no sentido de um "padrão tardio" na capilaroscopia. Este grupo parece ter um prognóstico melhor, com menos envolvimento de órgão. Na avaliação dos padrões capilaroscópicos de ES será útil introduzir o conceito de "padrão estável" para refletir esta realidade de interesse prognóstico.

CO114 – SYSTEMIC SCLEROSIS IS ASSOCIATED WITH POOR SLEEP QUALITY AND DECREASED QUALITY OF LIFE

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Introduction: Sleep dysfunction is highly prevalent in diseases with an important inflammatory component. Recent studies have demonstrated that sleep disturbance and circadian rhythm disruption result in an up-regulation of inflammatory cytokines, perhaps leading to a vicious circle.

Systemic sclerosis (SSc) has been associated with poor sleep quality, and some clinical features seem to predict worse sleep quality, such as gastrointestinal symptoms, pain and pruritus. Sleep quality is also associated with quality of life, which in turn is thought to be decreased in SSc patients.
Objectives: We aimed to assess sleep quality and quality of life in SSc patients and describe possible associations with demographic and clinical variables.
Methods: Patients with SSc were consecutively recruited and asked to answer three questionnaires: the Pittsburgh sleep quality index (PSQI), the European quality of life questionnaire (EQ5D) and the Hopkins telephone diagnostic interview for restless leg syndrome (RLS). Age- and sex-matched healthy controls (HC) were recruited from the Hospital and University staff and from healthy blood donors to the IMM Biobank. Workers with night shifts, sleep apnea, fibromyalgia or an inflammatory rheumatic disease were excluded. We compared continuous and categorical variables across groups using Student's T-test or Chi-square test, respectively. We conducted univariate and multivariate linear regression analysis to determine predictors of PSQI scores.
Results: 62 SSc patients were enrolled, 90.2% were women, the mean age and disease duration was 56.6±16.1years and 11.1±6.6 years, respectively. Limited SSc was more frequent than the diffuse subtype (63% *vs.* 37%). The most frequent clinical manifestations were digital ulcers (66%), gastrointestinal involvement (48%) and interstitial lung disease (45%).

59 age- and sex-matched HC were included. Anti-

depressants use was similar in both groups (20.4% SSc *vs.* 13.6% HC, p=0.33), but SSc patients used hypnotics more frequently (46.6% *vs.* 18.6%, p=0.001).

The mean PSQI value was higher in SSc patients (7.7±0.5 *vs.* 6.0±0.5, p=0.025), translating worse sleep quality. Quality of life as per EQ5D was greatly decreased in SSc patients compared to HC (0.54±0.03 *vs.* 0.81±0.03, p<0.001; mean [range] for general Portuguese population 0.76 [-0.5 to 1.0]). Both indexes were negatively correlated (Spearman r=-0.433, p<0.001).

In the patient population, univariate analysis revealed that PSQI was associated with age (p=0.009), antidepressants use (p=0.015) and EQ5D scores (p<0.001). Disease variables associated with higher PSQI included telangiectasia (p=0.037), arthritis (p=0.02) and calcinosis (p=0.004). Multivariate analysis identified age (p=0.033), EQ5D score (p<0.001), arthritis (p=0.003) and calcinosis (p=0.004) as the variables independently associated with poor sleep quality.

Conclusions: SSc patients have increased sleep disturbances and this is negatively correlated with quality of life. Older age and history of arthritis or calcinosis were also independently associated with a worse sleep score.

C063 – REAL-LIFE EFFECTIVENESS OF GOLIMUMAB IN BIOLOGIC-NAÏVE RHEUMATOID ARTHRITIS PATIENTS – DATA FROM REUMA.PT, A PORTUGUESE REGISTRY

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Background: Registries are becoming an increasingly important source of data, providing additional information on the use of biologics in clinical practice. The real-world clinical data currently available regarding the use of SC anti-TNFs is still limited. Therefore, it is of utmost importance to increase the knowledge of Golimumab (GLM) effectiveness in the clinical practice.

Objectives: This study was designed to access the effectiveness of SC GLM 50 mg/monthly + MTX through 52 weeks of treatment in biologic-naïve RA patients. The primary objective was to investigate the proportion of patients achieving clinical remission (DAS28ESR <2.6). The secondary objectives were the evaluation of: the treatment persistence rates; the proportion of patients achieving functional response (deltaHAQ>0.22); and the effect of treatment on DAS28 individual components.

Methods: This was a retrospective non-interventional study based on the Rheumatic Diseases Portuguese Register (Reuma.pt). It was conducted in a cohort of patients aged >18 years with active RA despite previous treatment with conventional DMARDs, biologic-naïve, who started SC GLM+MTX, from March 2011 to August 2015. The cumulative incidence of achieving clinical remission, treatment persistence and functional response/remission were estimated using survival analysis. Cox regression was used to calculate the hazard ratios.

Results: A total of 109 patients (86.3% female, mean age 55.5±13.2 years; mean age of diagnosis 45.5±13.5 years, rheumatoid factor 78% positive) met the study criteria. Ninety-three had a follow-up of at least 52 weeks (i.e. all patients who started treatment before August 2014). At week 52, 38.3% of patients were on

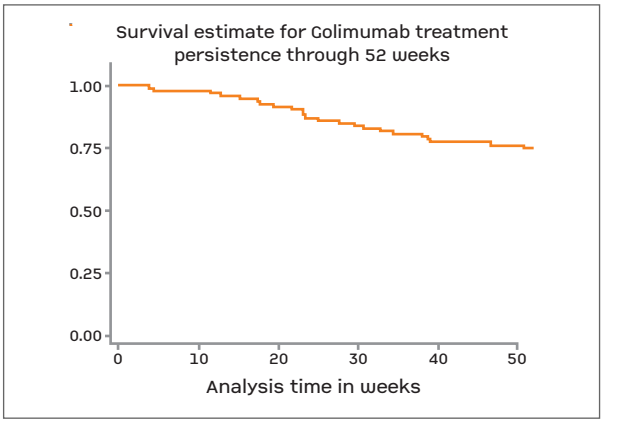

FIGURE 1.

clinical remission, 91.9% achieved functional response and 35.2% were on functional remission (HAQ<0.5). The treatment persistence rate was 75.3% for the individuals who were in the study for = 52 weeks (Figure 1). For functional remission, high CRP levels at baseline seem to be a determining factor (HR=0.54, p=0.026).

Conclusions: This is the first Golimumab data analysis generated from the Portuguese registry Reuma.pt. Our results are in agreement with data from other national registries and demonstrate the long-term effectiveness and the high treatment persistence rates of GLM through 52 weeks.

CO130 – HIGH C-REACTIVE PROTEIN AT BASELINE IS ASSOCIATED WITH LONG-TERM TREATMENT PERSISTENCE IN PATIENTS WITH RHEUMATOID ARTHRITIS TREATED WITH RITUXIMAB

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Background: B cell depletion with rituximab (RTX) is an established treatment for rheumatoid arthritis (RA). It was first introduced at UCL in 1998 and at this centre patients are followed up in a dedicated weekly clinic. Initial treatment protocols included combination with cyclophosphamide, but since 2001 patients are treated with cycles of 2x1g RTX. Initial retreatment strategies based on retreatment at flare evolved in the last 6 years patients to retreatment to avoid flare, based on the duration of response to initial cycles. We aim to characterize RTX drug survival in our cohort and determine 5 years drug retention predictors.

Methods: We conducted a retrospective cohort study of RA patients treated with RTX at UCL between 1998 and 2015. Medical records of 248 RA patients were reviewed; demographic and clinical data was collected. All patients fulfilled 1987 ACR classification criteria. Drug survival data was analysed using Kaplan-Meier estimates. Predictors for 5-years drug retention were determined by a multivariate logistic regression model.

Results: Of the 248 patients included, 81% were female, 80.9% Caucasians. Mean age (SD) was 60.75± 15.4yrs and mean age at diagnosis was 39.25±16.2yrs. RF and ACPA were positive in 89% and 84.6% of patients, respectively. History of smoking was present in 59.43%. Mean follow up duration after RTX initiation was 1737±1206 days (maximum 6055 days). At 2 and 5 years, 78% and 61% patients remained on rituximab. Baseline DAS28 was on average 5.93±1.25, CRP 2.2±2.9mg/L. Majority of patients received concomitant therapy with other DMARDs/steroids, more frequently MTX 46%, SSZ 21.4% and low-dose prednisolone 28.6%. Main reasons for RTX discontinuation were: inefficacy 49 patients (44 primary failures, 6 secondary failures), adverse events 18 patients, pregnancy 1 patient and death 5 patients.

In univariate analysis, current age, disease duration, RF seropositivity, CRP at baseline, number of previous biologics and concomitant use of prednisolone were associated with long-term RTX retention (>5 years). In multivariate analysis, only CRP at baseline kept statistical significance (p=0.014).

Conclusions: Overall, high drug retention rates were observed, independent of concomitant use of cDMARDs. In multivariate analysis, higher baseline CRP was associated with long-term drug survival. We found that secondary failures were rare (8% of drop outs) with the current retreatment strategy based on the prevention of flare.

CO201 – B-CELL MARKERS EXPRESSION IS AFFECTED BY TNF-INHIBITORS AND TOCILIZUMAB TREATMENT IN RHEUMATOID ARTHRITIS

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Introduction: The use of TNF-inhibitors and/or the IL-6 receptor antagonist, tocilizumab, in rheumatoid arthritis (RA) have pleiotropic effects that also involve circulating B-cells. The main goal of this study was to

assess the effect of TNF-inhibitors and tocilizumab on B-cell phenotype and gene expression in RA.
Methods: Blood samples were collected from untreated early RA (ERA) patients (< 1 year of disease duration), established RA patients under methotrexate (MTX) treatment, established RA patients before and after treatment with TNF-inhibitors and tocilizumab, and healthy donors. B-cell subpopulations were characterized by flow cytometry and B-cell gene expression was analyzed by real-time PCR on isolated B-cells. Serum levels of BAFF, CXCL13 and sCD23 were determined by ELISA.
Results: The frequency of total CD19+ B cells in circulation was similar between controls and all RA groups, irrespective of treatment. However, established RA patients under MTX treatment had significantly increased frequencies of double negative (IgD-CD27-) B cells in comparison with controls. Treatment with TNF-inhibitors and tocilizumab did not affect the circulating levels of B-cell subpopulations. CD86 and CD95 had, respectively, a significantly lower and higher expression on B-cells after anti-TNF treatment. HLA-DR MFI values were also significantly increased in RA patients after treatment with TNF antagonists and tocilizumab. BAFF-R, TACI, BCMA, CD69, CXCR5, TLR9, IgM and CD5 expression on B cells were not significantly affected by TNF-inhibitors and tocilizumab. In addition, alterations in B cell gene expression of BAFF-R, TACI, TLR9, Fc RIIB, BCL-2, BLIMP-1 and β2M were found in ERA and established RA patients under MTX treatment when compared to controls, but no significant differences were observed after anti-TNF and tocilizumab treatments when comparing baseline and follow-ups. Moreover, CXCL13 and sCD23, but not BAFF serum levels were significantly increased since early RA, but no effect of TNF-inhibitors and tocilizumab treatment was observed.
Conclusions: In RA patients, the use of TNF-inhibitors and/or tocilizumab treatment affects B-cell phenotype in circulation, but not B-cell frequencies or B-cell gene expression. Our results suggest that TNF-inhibitors and tocilizumab help to reduce B-cell infiltration in inflammatory sites, allowing these activated B-cells to recirculate through blood and lymphatic systems.

CO243 – OSTEOPOROSIS TREATMENT AND OUTCOMES OF PROXIMAL FEMUR FRACTURES - STILL MISSING THE OPPORTUNITY?

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Introduction: Hip fractures are the most serious outcome of osteoporosis (OP) due to the associated increase in morbidity and mortality, loss of independence and social costs. Although identification and treatment of these high risk patients is crucial and recommended, several studies showed that it is frequently forgotten.
Objective: To characterize patients with fractures of the proximal femur admitted at our hospital over a 1-year period, and assess whether OP treatment influences the outcomes of these patients.
Methods: Retrospective analysis of patients admitted between 1st of January and 31st of December 2015 with fractures of the proximal femur using clinical records to assess demographic data, fracture site, co-morbidities, history of previous fracture or OP treatment, intra-hospital mortality rate and OP treatment instituted at discharge. Patients with fractures resulting from high-energy trauma or transferred to other institutions were excluded. Mortality predictor factors were determined by a multivariate logistical regression model.
Results: In total, 348 patients were included. The majority (73.6%) were women with an average age of 82±9years. Only 44(13%) patients reported having OP, the same number of patients had a history of one or more fragility fractures and only 22 of these patients had a record of previous OP treatment. Two or more comorbidities were present in 67% of patients, hypertension being the most frequent. The type of fracture most commonly encountered was intertrochanteric, in 212 cases. Twenty three patients did not undergo operations; 113 underwent joint replacement; and 212 underwent osteosynthesis. The mean length of hospital stay was 12±10 days. At discharge, only 52(16%) patients were prescribed antireabsortive treatment, all with bisphosphonates. Fifty nine patients were also treated with calcium and vitamin D. Until 31st of December, 62(17.8%) had died, 20 of them during hospitalization for the fracture. Factors associated with mortality were older age, male gender, lack of diagnosis of osteoporosis prior to the fracture, absence of prior treatment of OP and nonsurgical treatment of fractures (Table 1).

Multivariate analysis showed that older age (LR

TABLE I. STATISTICALLY SIGNIFICANT VARIABLES THAT INFLUENCE THE MORTALITY OF PATIENTS WITH FRACTURE OF THE PROXIMAL FEMUR

	Alive patients (n=286)	Deceased patients (n=62)	P
Age (years)	81.6 ± 9.3	84.8 ± 8.6	0.012
Women, n(%)	219 (85.5)	37 (14.5)	0.006
Previous osteoporosis diagnosis, n (%)	43 (97.7)	1 (2.3)	0.004
Without previous treatment, n (%)	223 (81.1)	52 (18.9)	0.007
Nonsurgical fracture treatment, n (%)	1 (6.3)	15 (93.8)	<0.001

+61.6; p0.03), male gender (LR +10.4; p0.01), and previous lack of diagnosis of OP (LR +11.7; p0.01) were independent predictors of mortality in patients with proximal femur fracture.

Conclusions: Patients with proximal femur fracture constitute a high risk population, where treatment intervention is essential and recommended by national and international guidelines. International registered treatment ratios remain low (20-30%) but in Portugal, the problem seems to be even more serious, with treatment rates ranging from 4.5% and 14.4%. Concerning mortality, it is estimated that within one year after femur facture, 10 to 20% of the patients die. Previous Portuguese studies showed mortality rates ranging between 10.2% and 21.7%. Our study is in line with this negative tendency, with low osteoporosis diagnosis, low treatment rate, and high mortality in this increasingly high risk elderly group of patients. These results are of great concern as they seem to show no improvement of care in the last 10 years and that it is urgent to implement measures that can reverse this situation.

CO238 – ARTHRITIS INDUCES EARLY BONE STRUCTURAL DEGRADATION AND MECHANICAL WEAKNESS

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Background: We have previously found in the chronic SKG mouse model of arthritis that long standing (5 and 8 months) inflammation directly leads to high collagen bone turnover, disorganization of the collagen network, disturbed bone microstructure and ultimately declining of bone biomechanical properties[1].

Objectives: Our main goal was to study the effects of the inflammatory process on the microarchitecture and mechanical properties of bone in the early stages of arthritis development.

Methods: Fifty Wistar adjuvant-induced arthritis (AIA) rats were monitored throughout arthritis development and sacrificed after 4, 11 and 22 days of disease induction. Thirty healthy non-arthritic rats, age and sex-matched, were sacrificed at the end of the experiment and used as controls for comparison. The inflammatory score, ankle perimeter and body weight were measured over the experimental period. At the time of sacrifice, bone and serum samples were collected for micro-CT and 3-point bending analysis as well as bone turnover markers (CTX-I and P1NP), respectively. All experiments were approved by the Animal User and Ethical Committees at the Instituto de Medicina Molecular (Lisbon University), according to the Portuguese law and the European recommendations.

Results: We have observed that bone turnover markers, CTX-I and P1NP, increased soon after arthritis onset ($p<0.0001$ and $p=0.0034$, respectively, when compared to healthy controls). Moreover, micro-CT analyses showed both in trabecular and cortical parameters, that the effects of inflammation on bone microstructure were evident since the 4th day of arthritis development. Of particular interest, trabecular bone volume

fraction decreased and cortical porosity increased at day 22 post disease induction when comparing to healthy controls (p=0.0001 and p<0.0001, respectively). Biomechanical tests revealed that arthritic bone have altered biomechanical properties, such as maximal bending force (arthritic group lower than healthy control, p<0.0001).

Conclusions: The inflammatory process induced bone loss, and reduces bone strength since the very early phase of arthritis.

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CO197 – REMISSION AND RE-TREATMENT OF PATIENTS WITH PAGET'S DISEASE OF BONE TREATED WITH ZOLENDRONIC ACID – A SINGLE CENTER 10 YEAR EXPERIENCE

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Background: Treatment of Paget's Disease of Bone (PDB) has been revolutionized by the use of zolendronic acid (ZA). Patients usually have a dramatic response to treatment with normalization serum alkaline phosphataise (ALP) levels and a longer period of clinical remission, compared with other class agents. Data from long-term use are scarse.

Objectives: Evaluate the effectiveness and safety of ZA in PDB patients, as well as remission, re-treatment rates and side effects in our outpatient population since 2005.

Methods: A retrospective study of PDB patients treated with 5 mg ZA intravenous infusion at our day-care center. Follow-up time, demographic and clinical characteristics, previous therapeutic agents, rate of response, number and reasons of re-treatment(s) and rates of adverse events were collected. A descriptive statistic analysis was made.

Results: 48 patients, 60% female, mean age of 75 years, with a median time since the diagnosis of 12.3 years. The disease was poliostotic in 73% of the patients and pelvis (65%), skull (29%) and spine (27%) were the most common pagetic localizations. Deafness was present in 12.5% and 65% had hip involvement. 44% patients had been treated with another biphosphonate agent previously. Response rates were 97.9% at 1 year, 87.2% after 2 years and 95.1% after 3 years. The mean ALP levels before ZA infusion was 290 UI/L and after 112 UI/L. Sixteen patients needed a re-treatment in the period of follow up, minimum of 1 year after the ZA infusion and maximum of 8 years after. 56.3% due to raised of ALP levels and 43.8% due pain/ hip involvement. Four patients needed a third infusion due to hip involvement, and 2 of them a forth infusion due to the same reason. All of the patients re-treated due to hip involvement had severe hip involvement at time of diagnosis. In our population, 2 patients achieved 10 years remission, 5 patients 9 years remission and 10 patients 8 years remission with a single ZA infusion. Recording adverse effects were: 14.6% Flu like symptoms (7 patients), 2% assintomatic hypocalcemia (1 patient) and no reports of osteonecrosis or fractures. All of these effects were reported after the first ZA infusion.

Conclusion: In our population, we find high long-term sustained remission rate. Only sixteen patients needed re-treatment. Patients maintained sustained remission up to 10 years of a single ZA infusion. Incidence of adverse events was similar to the reported in the literature.

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CO119 – SERUM RECEPTOR ACTIVATOR OF NFKB LIGAND (RANKL) AND OSTEOPROTEGERIN (OPG) IN JUVENILE IDIOPATHIC ARTHRITIS: RELATION TO DISEASE ACTIVITY

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Introduction: In the past decade, tumor necrosis factor (TNF) was identified as the main inflammatory pathogenic mediator for chronic arthritis, not only inducing but also perpetuating the inflammatory process in the synovial membrane. Among the TNF family, receptor activator of nuclear factor kB (RANK), receptor activator of nuclear factor kB ligand (RANKL), and osteoprotegerin (OPG), a soluble receptor that inactivates RANKL, are known to interfere in the immune system, bone metabolism, and endocrine functions. The clinical relevance of observations of serum levels of RANKL and OPG in Juvenile idiopathic arthritis (JIA) is not clear.
Objectives: To assess the serum levels of RANKL and OPG in JIA patients and to detect their relation to disease activity in the different JIA categories.
Methods: Consecutively recruited JIA patients were clinically examined, the Juvenile arthritis disease activity score in 27 joints (JADAS27) calculated and Childhood Health Assessment Questionnaire (CHAQ) used to measure the functional status. Routine laboratory examinations were recorded and serum RANKL and OPG levels were determined by ELISA. Nonparametric tests and multivariate linear regression were used for analysis the relation between the levels of RANKL and OPG versus JADAS27 and CHAQ, adjusting for gender, body mass index, age, disease duration and JIA categories.
Results: 316 JIA patients, 65% female, with mean age 17.10±9.01 years and mean disease duration 8.11±1.41 years. The distribution of JIA categories was: 105 persistent oligoarticular, 51 extended oligoarticular, 51 polyarticular RF negative, 30 polyarticular RF positive, 26 systemic, 36 enthesitis-related arthritis and 17 psoriatic arthritis. Taking all JIA patients, there was no relationship between serum RANKL levels and JADAS27 or CHAQ. However, when we analyzed the different JIA categories, in polyarticular RF positive JIA there was a significant positive relation between serum RANKL levels and JADAS27 (ß=0.226; adjusted p=0.013) and also between RANKL and CHAQ (ß=0.027; adjusted p=0.046). Regarding OPG, considering all the JIA subtypes, there was no correlation with JADAS27 or CHAQ. However, OPG levels were inversely correlated with the number of active joints, one of the components of JADAS27 (ß=-0.007; adjusted p=0.003).
Conclusion: Our data reveal that RANKL levels are associated with disease activity and functional impairment in polyarticular RF positive JIA, reinforcing the attractive role of therapeutic agents targeting RANKL. In all JIA categories, OPG levels were inversely related to the number of active joints, denoting the possible relationship to disease activity. More studies are needed in order to better understand the role of these cytokines in JIA.

CO139 – COMPARISON OF THE UTILITY AND VALIDITY OF THREE SCORING TOOLS TO MEASURE SKIN INVOLVEMENT IN PATIENTS WITH JUVENILE DERMATOMYOSITIS

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Objective: To compare the abbreviated Cutaneous Assessment Tool (CAT), Disease Activity Score (DAS) and Myositis Intention to Treat Activity Index (MITAX) and correlate them with the physician's 10cm skin visual analogue scale (VAS) in order to define which tool best assesses skin disease in patients with Juvenile Dermatomyositis (JDM).
Methods: 71 patients recruited to the UK JDM Cohort & Biomarker Study were included and assessed for skin disease using the CAT, DAS, MITAX and skin VAS. Childhood Myositis Assessment Scale (CMAS), Manual Muscle Testing (MMT8), muscle enzymes, inflammatory markers and physician's global VAS were recorded. Relationships were evaluated using Spearman's correlations and predictors with linear regression. Inter-rater reliability was assessed using intra-class correlation coefficients.
Results: The CAT and the skin sections of both the DAS and MITAX correlated well with the skin VAS (rs 0.63, p<0.001; rs 0.79, p<0.001 and rs 0.60, p<0.001, respectively). The skin section of the DAS had a statistically higher correlation with the skin VAS than the other two tools. For the physician's global VAS, the correlation coefficient was strongest (rs >0.75) between physician's global VAS/total MITAX and physician's global VAS/total DAS, as all of these perform a generalised assessment of the disease. DAS skin and CAT Activity scores were both moderately inversely correlated with both CMAS and MMT8 scores. No correlations were found between the skin tools and inflammatory markers or muscle enzymes. We next evaluated the capacity of each tool to predict skin VAS. In univariate models, although all the measures were significant skin disease activity determinants, the skin sections of the tools were stronger than the global tools. The DAS skin appeared to be the strongest tool to evaluate skin VAS, based on having the highest model-adjusted R2 therefore accounting for the greatest degree of variance in skin VAS. In the bivariate models of skin VAS, the addition of physician's global VAS to the tools CAT activity, DAS total, DAS skin, MITAX global and MITAX skin strengthened each of those models. Both variables in the bivariate model consisting of CAT activity and physician's global VAS were statistically significant, accounting for a proportion of variance in skin VAS of R2 = 0.422. Although the bivariate model using the combination of DAS skin and physician's global VAS appeared to be a stronger estimator of skin VAS (R2 = 0.557), physician's global VAS was not statistically significant in this model (p=0.012), using the stringent threshold of 0.001 (to allow for multiple comparisons). DAS skin and CAT were the quickest to complete (0.68±0.1 and 0.63±0.1 minutes respectively).
Conclusion: The 3 skin tools were quick and easy to use. The DAS skin correlated best with the skin VAS. The addition of CAT in a bivariate model containing the physician's global VAS was a statistically significant estimator of skin VAS score. We propose that there is scope for a new skin tool to be devised and tested, which takes into account the strengths of the 3 existing tools.

C0165 – JUVENILE IDIOPATHIC ARTHRITIS IN ADULTHOOD: CLINICAL PATTERN AND LONG-TERM OUTCOMES OF 426 PATIENTS

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Background: Classification inconsistencies, barriers in care transition and lack of integrated paediatric and

adult registries, have contributed to unclear understanding of Juvenile Idiopathic Arthritis (JIA) impact in adulthood.

Objectives: To determine which adult JIA patients registered on the Rheumatic Diseases Portuguese Register (Reuma.pt) fulfill classification criteria for adult rheumatic diseases, evaluate their outcomes and determine clinical predictors of inactive disease, functional status and damage.

Methods: Cross-sectional evaluation of JIA patients registered in Reuma.pt that at the time of data analysis were older than 18 years (yrs) and had more than 5 yrs of disease duration. Data from Reuma.pt regarding fulfilment of classification criteria of adult rheumatic diseases were analyzed. Outcome assessments included last year HAQ, articular (JADI-A) and extraarticular (JADI-E) damage index and disease activity, at the time of last visit, using disease specific indexes according to current adult rheumatic disease. Patients were classified as having inactive or active disease based on index cut--offs. Sociodemographic features, JIA related variables and concomitant therapies were analysed by univariate and multivariate regression analysis to identify predictors of inactive disease, functional status and damage.

Results: From the 734 patients eligible for this study, only 426 had complete data regarding JIA onset and were included (Table 1). All systemic JIA patients fulfilled criteria for Adult Still's disease, 53.8% with persistent systemic features and 46.2% with polyarticular involvement. 94.1% of the RF+ and 57.1% of the RF negative polyarthritis patients fulfilled criteria for Rheumatoid Arthritis (RA). The persistent oligoarthritis patients were classified into RA in 6.1%, Ankylosing Spondylitis (AS) in 7.6%, undifferentiated Spondyloarthritis (USpA) in 13.6%, enteropathic arthritis in 6.1% and psoriatic arthritis (PsA) in 7.6%. Most of the oligoarticular extended patients were classified as RA (38.9%) or USpA (18.5%). Enthesitis-related arthritis patients fulfilled criteria for any form of SpA in 95%. All PsA patients maintained this classification. 10.6% of the JIA patients could not be classified in any adult rheumatic disease. 71.9% of the patients were still treated with non-biologic or biologic DMARD. Median HAQ score was 0.25 and 11% of the patients had HAQ>1.5. RF+ (p=0.0018) and previous therapy with corticosteroid (p<0.0001) were associated with higher HAQ scores. Patients with inactive disease were only 33% and had significantly less disease duration (p<0.0001), diagnosis delay (p=0.0076) and corticosteroids exposure (p=0.013). Longer disease duration (p=0.0001), treatment with corticosteroids (p=0.0019) and biologics (p=0.011) were associated with higher JADI-A and JADI-E. Employed patients had lower JADI-A and JADI-E than unemployed or retired patients (p=0.0002). Younger onset age was predictive of higher HAQ (ß=-0.024; p=0.021), JADI-A (ß=-0.856; p=0.003) and JADI-E (ß=-0.098; p=0.008). Older onset age increased the chance of inactive disease (OR=1.365; p=0.004) and anti–citrullinated protein antibodies positivity decreased in 94.6% the likelihood of inactive disease (OR=0.0534; p=0.014).

Conclusion: Most JIA patients fulfilled classification criteria for adult rheumatic diseases, maintain active disease and have functional impairment at long-term follow up. Younger age at disease onset was predictive of higher HAQ, JADI-A and JADI-E scores and decreased the chance of inactive disease in adulthood.