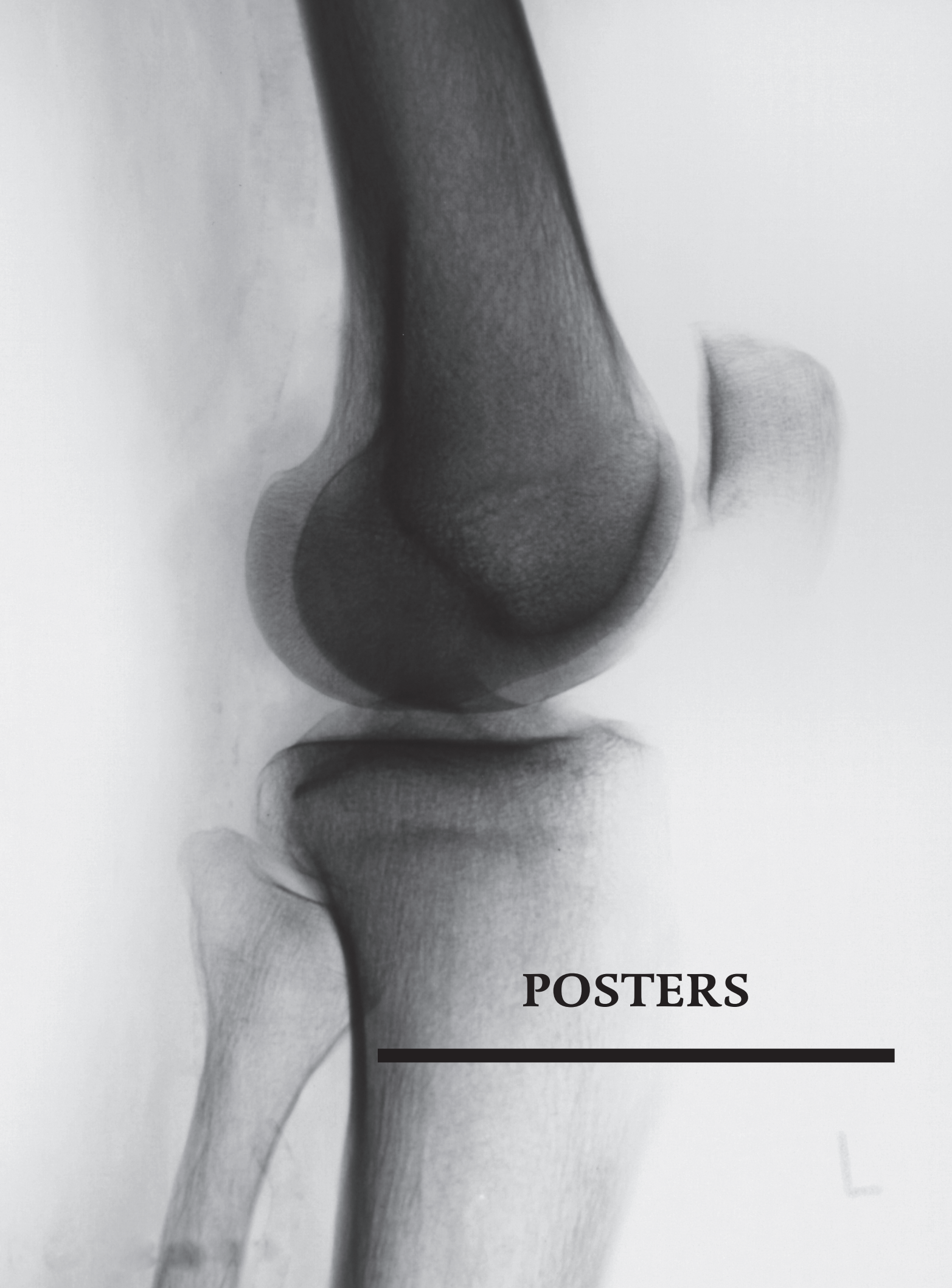

POSTERS

Posters

ACTA REUMATOL PORT. 2019:44:49-121 (SUP)

P001 – UTILIZAÇÃO DE CERTOLIZUMAB EM DOSE DE CARGA EM DOENTES COM PATOLOGIA REUMÁTICA INFLAMATÓRIA: A EXPERIÊNCIA DE UM CENTRO

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Introdução: o certolizumab pegol (CTZ) é um agente biotecnológico anti-fator de necrose tumoral alfa (TNFα) aprovado para o tratamento de várias doenças reumáticas inflamatórias: artrite reumatóide (AR), espondilartrite (SpA) axial e artrite psoriásica (APso). A sua administração é subcutânea, com uma dose de carga de 400mg nas semanas 0, 2 e 4; posteriormente, a dose de manutenção é de 200mg a cada 2 semanas. Na AR, alguns dados apontam para uma melhor resposta, com perfil de segurança semelhante, em doentes expostos à dose de carga de CTZ em comparação com doentes expostos à dose de manutenção.
Objetivos: descrever a experiência do uso de certolizumab na dose de carga (400mg s.c quinzenalmente) em doentes com diferentes patologias inflamatórias reumáticas, seguidos num Serviço de Reumatologia de um Centro Hospitalar Universitário.
Métodos: foram selecionados todos os doentes registados no reuma.pt com patologia reumática inflamatória expostos a dose de carga de CTZ após as 4 primeiras semanas de tratamento. Para os doentes incluídos, descrevem-se aspetos da doença (diagnóstico, tempo de evolução, avaliação da atividade de doença antes e após dose de carga de CTZ) e do seu tratamento (DMARDs [Disease-Modifying Antirheumatic Drugs] prévios; tempo, motivo de início e descontinuação e eventos adversos).
Resultados: encontrámos 5 doentes tratados com CTZ em dose de carga. Relativamente à patologia de base, 2 tinham o diagnóstico de SpA associada a doença de Crohn, 1 de SpA axial, 1 de APso e 1 de AR. Quatro eram do sexo feminino (4/5), com uma idade média ao início do CTZ em dose de carga de 50 anos (33-73 anos) e duração média de doença de 6 anos (1-12 anos).

TABELA. CARACTERIZAÇÃO DOS DOENTES, COM DIFERENTES DOENÇAS REUMÁTICAS, TRATADOS COM CERTOLIZUMAB NA DOSE DE CARGA (400MG A CADA 2 SEMANAS) E SEGUIDOS NO SERVIÇO DE REUMATOLOGIA DE UM CENTRO HOSPITALAR UNIVERSITÁRIO

		Doente 1	Doente 2	Doente 3	Doente 4	Doente 5
Doença Reumática		AR	SpA associada a DC	SpA axial	SpA associada a DC	APso
Sexo		Feminino	Feminino	Feminino	Masculino	Feminino
À data de início de CTZ em dose de carga	Idade (anos)	57	39	33	73	49
	Duração doença (anos)	10	3	2	1	12
	DMARDs prévios	MTX, ETN, TCZ, RTX, CTZ**	MTX, AZT, ADA, IFX, GOL, CTZ**	CTZ**	IFX, CTZ**	MTX, CSA, ADA, TCZ, UST, ETN, SCK, CTZ**
DMARDs concomitantes		LFN	SSZ	0	0	MTX
Motivo de início		↑ atividade de doença apesar de CTZ**	↑ atividade de doença apesar de CTZ**	↑ atividade de doença apesar de CTZ**	↑ atividade de doença apesar de CTZ**	↑atividade de doença apesar de CTZ**
Tempo de CTZ em dose de carga (meses)*		22	6	7	2	14
Δ atividade doença sob CTZ dose de carga (final – inicial)		EVA doente: -20mm DAS 28 4V: -1.525 DAS 28 4V PCR: -1.831 PCR: +79,9 mg/L	EVA doente: -60mm BASDAI: -2.4 ASDAS PCR: -1 PCR: +8,2mg/L	EVA doente: 0mm BASDAI: +1.1 ASDAS PCR: +0.8 PCR: +5,6mg/L	EVA doente: +20mm BASDAI: -2.6 ASDAS PCR: -0.4 PCR: -22,6mg/L	EVA doente: +40mm DAS 28 4V: +0.607 DAS 28 4V PCR: +0.439 PCR: +12,4mg/L
Resposta clínica		EULAR: Resposta moderada	ASAS: sem resposta ASDAS: sem melhoria clinicamente significativa	ASAS: sem resposta ASDAS: sem melhoria clinicamente significativa	ASAS: sem resposta ASDAS: sem melhoria clinicamente significativa	ASAS: sem resposta ASDAS: sem melhoria clinicamente significativa PsARC e EULAR: sem resposta
Eventos adversos		1 (parou 4 meses para realizar PTA que infetou)	0	0	0	0
Descontinuação? (e motivo)		Sim: por evento adverso, realizou *switch* terapêutico para abatacept	Sim: Por crise da DC (refratária ao CTZ em dose de carga) fez *switch* para UST	Não	Sim: Por crise da DC (refratária ao CTZ em dose de carga) fez *switch* para UST	Aguarda autorização de *switch* terapêutico para tofacitinib, por falência tardia

Legenda: ADA: Adalimumab; APso: Artrite Psoriásica; AR: Artrite Reumatóide; ASAS: Assessment of SpondyloArthritis International Society; ASDAS: Ankylosing Spondylitis Disease Activity Score; AZT: Azatioprina; BASDAI: Bath Ankylosing Spondylitis Disease Activity Index; CTZ: Certolizumab; CSA: ciclosporina; DAS: Disease Activity Score; DC: Doença de Crohn; DMARDs: Disease-Modifying Antirheumatic Drugs; ETN: Etanercept; EULAR: European League Against Rheumatism; EVA: escala visual analógica da atividade de doença pelo doente; GOL: Golimumab; IFX: Infliximab; LFN: Leflunomida; MTX: Metotrexato; PsARC: Psoriatic Arthritis Response Criteria; PTA: Prótese total da anca; RTX: Rituximab; SCK: Secucinumab; SpA: Espondilartrite; SSZ: Sulfassalazina; TCZ: Tocilizumab; UST: Ustecinumab; *até Dez/2018; ** dose de manutenção (200mg s.c., quinzenalmente).

Quanto às terapêuticas prévias, apenas um doente teve o CTZ como primeiro fármaco biotecnológico e 3 realizaram csDMARD (conventional synthetic Disease-Modifying Antirheumatic Drugs) concomitantemente ao CTZ (3/5). Em todos eles, o motivo de início foi a perda de resposta após o período de indução com a dose de carga, sendo o tempo médio de tratamento com CTZ em dose de carga de 10 meses (2-22 meses). Relativamente à avaliação da atividade de doença, apenas um doente (AR) apresentou resposta clínica satisfatória: resposta EULAR moderada. Quatro doentes apresentaram um aumento da proteína C-reativa (PCR). Quatro doentes descontinuaram a terapêutica (4/5): 2 fizeram switch para ustecinumab por refratoriedade da doença inflamatória intestinal (SpA associada a doença de Crohn); 1 fez switch para abatacept após ter parado o CTZ para realização de artroplastia total da anca com complicação infeciosa (AR); 1 aguarda switch para tofacitinib por falência tardia de resposta (APso). Um doente mantem-se sob terapêutica (SpA axial), apesar de manter atividade de doença, tendo sido otimizada a dose de anti-inflamatório, ponderando-se switch terapêutico caso se mantenha sem resposta (tabela 1).

Conclusão: apesar da amostra exígua não permitir grandes inferências, os resultados da utilização do nosso centro não são particularmente satisfatórios. Ainda que em termos de segurança só um doente tenha apresentado um evento adverso infecioso significativo, em apenas um doente foi possível observar uma resposta clínica satisfatória sustentada, em específico no doente com AR, doença reumática na qual existem mais dados da utilização do CTZ em dose de carga. Mais estudos são necessários para aferir a resposta clínica ao CTZ em dose de carga nas diferentes doenças reumáticas inflamatórias.

P003 - A MÃO NA ARTRITE REUMATÓIDE: DEFORMIDADES E FUNÇÃO

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Introdução: a artrite reumatóide (AR) caracteriza-se, classicamente, pelo envolvimento das articulações do punho e mão, nomeadamente, das articulações metacarpofalângicas e interfalângicas proximais, salvaguardando o facto destas deformidades clássicas serem cada vez menos comuns, com o surgimento de terapêuticas mais eficazes. A deterioração da função da mão está bem documentada e os doentes referem, frequentemente, dificuldade no desempenho das actividades de vida diária, comprometendo a sua autonomia e participação social.

Objectivo: caracterização da função da mão em doentes com AR e, secundariamente, identificação da utilização de produtos de apoio.

Materiais e Métodos: após a obtenção de consentimento informado, foi aplicado um inquérito a todos os doentes com o diagnóstico de AR (estabelecido por médico reumatologista), avaliados consecutivamente em consulta externa de Reumatologia ou Hospital de Dia, entre Agosto e Outubro de 2018, sem outra patologia do foro músculo-esquelético ou neuromuscular que determinasse compromisso funcional importante da mão. Foram colhidas variáveis sociodemográficas e clínicas dos doentes, e aplicada a escala Cochin Hand Functional Scale (CHFS), cuja pontuação varia entre 0 (funcionalidade completa) e 90 (incapacidade funcional máxima) pontos. As deformidades características do atingimento da mão e/ou punho pela doença foram observadas e registadas pelo médico assistente. A análise estatística dos dados foi realizada utilizando o software SPSS versão 23.

Resultados: obteve-se uma amostra de 79 doentes, maioritariamente do sexo feminino (69,60%), com uma idade média de 59,72±11,77 anos e com o diagnóstico de AR há 11,72±8,29 anos. A maioria (73,40%) apresentava, pelo menos, uma deformidade da mão ou punho, sendo a mais frequente a atrofia dos músculos interósseos, seguida pelo desvio cubital das metacarpofalângicas e deformidade em tecla de piano. A pontuação média na CHFS foi de 17,94±18,26, com um valor mínimo e máximo registados de 0 e 80 pontos, respectivamente. A presença de deformidades, a pontuação no Health Assessment questionnaire (HAQ), a pontuação na escala numérica atribuída à dor das mãos, os anos decorridos desde o aparecimento de sintomas da doença e desde o estabelecimento do diagnóstico correlacionaram-se com a pontuação obtida na CHFS. Seis doentes possuíam produtos de apoio, sendo que somente num caso este visava colmatar o comprometimento funcional da mão.

Conclusão: apesar da elevada prevalência de deformidades da mão e/ou punho, a maioria dos doentes pontuou significativamente abaixo do valor máximo da

CHFS. O facto de apenas uma minoria destes doentes possuir produtos de apoio alerta-nos para a necessidade de uma avaliação funcional e identificação de necessidades de forma mais criteriosa, entre doentes com artrite reumatóide.

P004 - ASSESSMENT OF THE VACCINATION STATUS IN RHEUMATIC DISEASE PATIENTS WITH IMMUNOSUPPRESSIVE THERAPIES

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Background: patients with rheumatic diseases are at a higher risk for infections associated to the underlying disease and immunosuppressive therapy. This fact leads to an increased morbidity and/or mortality. Effective vaccination is essential for the prevention of a significant number of these infections, namely influenza and pneumococcal vaccination. Vaccination rates in this subgroup of patients are relatively low and given the increased risk of infections, vaccination seems to be important for patients with rheumatic diseases.
Objective: to characterize the vaccination status in a cohort of portuguese rheumatic disease patients under immunosuppressive treatment.
Methods: cross-sectional study in a tertiary rheumatology department. Convenience sampling was used for data collection from all 1086 patients aged ^{3} 18 years registered in rheuma.pt with at least one appointment in the last year. We apply a questionnaire (on the rheumatology appointment or by phone) between january and december 2018 asking about influenza and pneumococcal vaccination status, reasons for unvaccinated status, who suggest vaccination and associated complications to the procedure. Influenza vaccination was considered completed if the patient was vaccinated in the last year and pneumococcal vaccination was considered completed according to the national recommendations. Categorical variables were described using absolute and relative frequencies and continuous data using mean and standard deviation. Statistical significance was defined as $p<0.05$. Statistical analysis was performed using IBM SPSS Statistics, version 21.0.
Results: we include 432 patients (75.2% female, mean age 57.9±13.9 years); 60.2% (n=260) had RA, 15.3% (n=66) SpA, 13% (n=56) SLE, 7.6% (n=33) PsA, , 1.4% (n=6) JIA and 2.5% (n=11) vasculitis. The majority of the patients was treated with at least one cDMARD at any point of the disease (83.8%, n=362, missing n=24) being 85,4% (n=309) in the last year and 46.8% (n=202, missing n=14) with biologic treatment. Vaccination rate and the reasons for non-vaccination status are shown in Table I. Two patients reported flu episodes after influenza vaccination. A significant association was found between biologic treatment and influenza and pneumococcal vaccination rate ($p\leq0.002$) but no with cDMARDs and between age and influenza vaccination but no with pneumococcal vaccination (higher influenza vaccination rate in the patients < 65 years; $p=0.002$). Vaccines were mostly prescribed by rheumatologists (41,9%) and general practitioner (18,8%).

TABLE. VACCINATION RATE AND THE REASONS FOR NON-VACCINATION STATUS

	Influenza vacine	Pneumococcal vaccine (Prevenar®)	Pneumococcal vaccine (Pneumo-23®)
Vaccination rate	58,8% (n=254)	17,8% (n=77)	28% (n=121)
	Influenza vacine (n=170/178)	Pneumococcal vaccine (Prevenar®) (n=290/355)	Pneumococcal vaccine (Pneumo-23®) (n=247/311)
Reasons for non-vaccination			
Own initiative	73.6%	36.9%	41.2%
No knowledge	11.2%	13.2%	12.9%
Fear	4.5%	2%	2.3%

Conclusion: in our cohort, and despite current recommendations, vaccination rates are still low among patients with autoimune diseases. Comparing the three vaccines, vaccination rate was higher for influenza vaccine and the main reason stated by unvaccinated patients was their own belief that vaccination was useless. A greater effort is required to improve these results.

P006 - IMPACT OF BLOCK SWITCH TO BIOSIMILAR ETANERCEPT IN PRACTICE – AN EXPERIENCE FROM ONE TERTIARY RHEUMATOLOGY DEPARTMENT

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Background: biosimilars of biotechnological agents represent an important opportunity to increase acces-

sibility to these medications. Clinicians still maintain reservations regarding the similarity of their efficacy and safety in practice.

Aim: to evaluate the clinical consequences of a non-medical switch of etanercept (ETN) original to biosimilar in a clinical practice setting.

Methods: the study included all patients aged 18+ treated in a Tertiary Rheumatology Department with original ETN who were switched to his biosimilar following a decison by the hospital administration, accepted by rheumatologists. Patients were informed of the switch prior to its occurrence, in simple terms underlining the similarity in terms of regulatory issues and scientific evidence. Disease activity, adverse events and adaptation to the drug delivery system were evaluated at each visit. Disease activity at baseline (time of switch), 3 and 6 months after was compared using Paired samples T-test or Wilcoxon test as adequate. A $p \leq 0.05$ was considered statistically significant. Continuous variables are presented as means and categorical variables as proportions.

Results: from 98 patients treated with original ETN in our department, 89 were switched to his biosimilar. The remaining ones maintained the treatment with the reference biological product for several reasons. Eight patients were excluded from this analysis due to poor adherence to treatment (n=4) and early interruption of treatment [n=4: due to surgery (n=1), respiratory infection (n=1), suspected allergic reaction to biosimilar (n=1) and own initiative (n=1)]. Of the remaining 81 patients (58% female, mean age 56.2±12.1 years), 38.3% had RA, 40.7% SpA, 18.5% PsA and 2.5% JIA. Disease activity was stable over the follow up in patients with RA, PsA and SpA as no statistically significant differences were observed in acute phase reactants, patient or physician global assessment between the three time points. Minor adverse events were reported by 2 patients (pain and local cutaneous reaction), 2 reported sense of disease exacerbation in the first three months that was not confirmed by clinical and analytical evaluation and 2 patients reported minor infections. Good adaptation to the drug delivery instrument was reported by 93.8% of patients (n=76).

Conclusion: the switch from ETN to his biosimilar in this group of patients followed in routine care did not affect the overall efficacy and safety of treatment. We did not observe a significant impact of nocebo effect.

TABLE I. ACUTE REACTANTS, DISEASE ACTIVITY, JOINT COUNT, PATIENT AND PHYSICIAN GLOBAL ASSESSMENT THROUGH FOLLOW-UP

	Baseline	3 Months after switch	6 Months after switch
ESR (mm/h) ϕ	8.00(12)	8.00(11.75)	10.50 (11.50)
CRP (mg/dL) ϕ	0.20(0.47)	0.31(0.51)	0.29 (0.38)
DAS-28-ESR §*	2.07(0.97)	2.17(0.95)	2.39 (1.08)
Tender joint-28 §	0.43(0.108)	0.43(0.09)	0.94 (0.26)
Swollen joint-28 §	0.22 (0.078)	0.49(0.11)	0.92 (0.36)
PtGA (0-100) §	38.22(3.41)	40.24(3.19)	42.50 (3.57)
PhGA (0-100) ϕ	10.00(17.00)	5.00(20.00)	10.00(10.00)

CRP- C-Reactive Protein; ESR- Erythrocyte Sedimentation Rate; PhGA physician global assessment; PtGA- patient global assessment; ϕ median (Interquartile range); § mean (Standard deviation). *Only for RA and PsA patients (n=46). DAS-28-ESR and PtGA were compared using T-test; the remaining ones were compared using Wilcoxon test. None of the differences between time-points was statistically significant by paired tests.

P008 - ULTRASOUND INTER-READER RELIABILITY OF INFLAMMATORY FINDINGS IN PATIENTS WITH POLYARTHRITIS

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Introduction: Ultrasonography is an imaging technique that allows rheumatologists to visualise structural and inflammatory changes within a joint. The objective of this study was to assess the inter-reader relibility of interpretation of inflammatory and destructive changes in a wide range of joints in patients with polyarthritis.

Methods: This study was divided in two parts: 1) consensus process and 2) reliability exercise. For the first part, a written questionnaire was sent by email to 6 sonographers from 3 portuguese hospitals with the highest level of competence (EULAR competency assessment level 2). The questionnaire included 17 questions divided in two groups: 1) elementary components in B-mode and Doppler assessment (effusion, synovial hypertrophy (SH), power Doppler (PD), erosions and synovitis definition) and 2) approach at the joint level (the definition of which plan and recess will be assessed in each joint). The participants were asked to rate their lev-

TABLE I. INTER-OBSERVER AGREEMENT FOR EACH ELEMENTARY COMPONENT AND FOR ANATOMICAL REGION

Elementary component	κ	Joint	κ	Joint	κ
Effusion	0.6044	Wrist	0.6767	Shoulder	0.7271
Synovial hypertrophy	0.6291	MCP	0.6866	Knee	0.7192
Power doppler	0.7195	PIP	0.7107	TT	0.8043
Erosions	0.7314	Elbow	0.7291	MTP	0.7040

MCP - Metacarpophalangeal joints, MTP – Metatarsophalangeal joints, PIP - Proximal interphalangeal joints, TT-Tibiotarsal joint. All p<0.001

el of agreement/disagreement for each statement using a 1-5 Likert scale (1=strongly disagree to 5-strongly agree). For the reliability exercise, video clips of US examinations of 40 joints (wrist, metacarpophalangeal (MCP) from 1 to 5, proximal interphalangeal (PIP) from 1 to 5, knee, tibiotarsal (TT) and metatarsophalangeal (MTP) joints from 1 to 5, elbow and shoulder) from each of 15 patients were collected (showing a multiplanar bilateral ultrasound approach). Each joint in each video was scored by individual ultrasonographers for the presence/absence of elementary components: effusion (Yes/No), SH (No/Grade 1 to 3), PD (No/Grade 1 to 3) and erosions (Yes/No). Inter-reader agreement analysis was assessed through Fleiss' kappa coefficient and classified according to Landis and Koch[8]: κ values < 0 were considered poor, 0-0.20 slight, 0.21-0.40 fair, 0.41-0.60 moderate, 0.61-0.80 good and 0.81-1.00 excellent. Statistical significance was defined as $p<0.05$. Statistical analysis was performed using STATA V.14.

Results: Thirty-seven joints of the 600 joints were excluded due to dislocation of the joint or presence of objects (rings/catheters) and the videos of a total of 563 joints were analysed by the 6 ultrasound experts. Inter-reader agreement was superior for TT joints and inferior for wrist; the identification of the erosions had the better agreement in the elementary components (Table I).

Conclusions: The reliability of interpretation of inflammatory and destructive changes using video clips was in general good to excellent and it was better for erosions and tibiotarsal joint (regarding elementary component and anatomical region, respectively).

P011 - NEUTROPHIL-, MONOCYTE-, EOSINOPHIL- AND BASOPHIL-LYMPHOCYTE RATIOS: ASSOCIATIONS WITH TRADITIONAL INFLAMMATORY MARKERS AND DISEASE ACTIVITY MEASURES AT BASELINE AND 6 MONTHS AFTER A BDMARD AMONG BIOLOGIC--NAIVE RHEUMATOID ARTHRITIS PATIENTS

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Background: Neutrophil-lymphocyte (NLR) and monocyte-lymphocyte (MLR) ratios have been not only suggested as systemic inflammatory markers, but also associated with disease activity in some inflammatory diseases. Eosinophil-lymphocyte (ELR) and basophil-lymphocyte (BLR) ratios have been studied to a lesser extent.

Methods: We conducted a retrospective study including all RA patients under the first bDMARD (biological disease-modifying antirheumatic drug), followed in a tertiary university hospital and registered in the Rheumatic Diseases Portuguese Register (Reuma.pt). Results of blood tests (C-reactive protein [CPR], erythrocyte sedimentation rate [ESR], serum amyloid A [SAA], rheumatoid factor [RF], anti-citrullinated protein autoantibodies [ACPA], haemoglobin, platelets, 25-hydroxide-vitamin D [25OHvitD]), leukocyte formula ratios (NLR, MLR, ELR, BLR) and disease activity and function measures (disease activity score 28 [DAS28 4V, 3V, 4V-CPR, 3V-CPR], clinician and simple disease activity scores [CDAI, SDAI], swollen and tender joint count [SJC, TJC], physician and patient visual analogical scale [VAS]) at baseline and at 6 months of bDMARD therapy were collected. Correlations between variables were evaluated by Spearman rank test (significance level at $p<0.05$), using SPSS 25.0 software.

Results: 435 patients were included: 81.2% female, mean age at baseline 53.3±11.4 years, mean disease duration 12.6±8.8 years, 72.2% RF positive, 77.1% ACPA positive, 52.5% erosive disease.

At baseline, NLR correlated positively with CRP ($r=0.343$; $p<0.001$), ESR ($r=0.124$; $p=0.031$), RF title ($r=0.185$; $p=0.009$), platelets count ($r=0.137$; $p=0.018$), DAS28(4V) ($r=0.183$; $p=0.002$), DAS28(3V) ($r=0.159$; $p=0.007$), DAS28(4V-CRP) ($r=0.235$; $p<0.001$), DAS28(3V-CRP) ($r=0.222$; $p<0.001$), SDAI ($r=0.178$; $p=0.024$), SJC ($r=0.120$; $p=0.040$), TJC ($r=0.139$; $p=0.018$) and patient VAS ($r=0.133$; $p=0.026$). At baseline, we also found a negative correlation between NLR and 25OHvitD levels ($r=-0.286$; $p=0.012$). Baseline MLR showed a positive correlation with baseline CRP ($r=0.138$; $p=0.017$), RF ($r=0.156$; $p=0.027$) and patient VAS ($r=0.135$; $p=0.023$). Similarly, at baseline, ELR correlated with CRP ($r=0.115$;

TABLE I. SPEARMAN CORRELATIONS BETWEEN LEUKOCYTE FORMULA RATIOS AND LABORATORY MARKERS AND RHEUMATOID ARTHRITIS DISEASE ACTIVITY MEASURES AT BASELINE AND AT 6 MONTHS OF BDMARD

	Baseline				Six Months			
	NLR	MLR	ELR	BLR	NLR	MLR	ELR	BLR
CRP	r=0.434 (p<0,001)	r=0.138 (p=0.017)	r=0.115 (p=0.048)	n.s.	r=0.340 (p<0.001)	r=0.161 (p=0.007)	r=0.120 (p=0.043)	n.s.
ESR	r=0.124 (p=0.031)	n.s.	n.s.	n.s.	r=0.140 (p=0.018)	n.s.	n.s.	n.s.
SAA	n.s.	n.s.	n.s.	n.s.	r=0.350 (p=0.008)	n.s.	n.s.	n.s.
Albumin	n.s.	n.s.	n.s.	r=0.165 (p=0.018)	n.s.	n.s.	n.s.	n.s.
RF	r=0.185 (p=0.009)	r=0.156 (p=0.027)	n.s.	n.s.	n.s.	n.s.	r=0.135 (p=0.046)	n.s.
ACPA	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hb	n.s.	n.s.	r=0.126 (p=0.029)	n.s.	n.s.	n.s.	n.s.	n.s.
Platelets	r=0.137 (p=0.018)	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	r=0.139 (p=0.020)
25OHvitD	r=-0.286 (p=0.012)	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
DAS 28 4V	r=0.183 (p=0.002)	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
DAS 28 3V	r=0.159 (p=0.007)	n.s.	n.s.	n.s.	n.s.	r=-0.130 (p=0.030)	n.s.	n.s.
DAS 28 4V-CRP	r=0.235 (p<0,001)	n.s.	r=0.126 (p=0.037)	r=0.138 (p=0.022)	n.s.	n.s.	n.s.	n.s.
DAS 28 3V-CRP	r=0.222 (p<0,001)	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
CDAI	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	r=0.180 (p=0.027)	n.s.
SDAI	r=0.178 (p=0.024)	n.s.	n.s.	n.s.	n.s.	n.s.	r=0.183 (p=0.025)	n.s.
SJC	r=0.120 (p=0.040)	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
TJC	r=0.139 (p=0.018)	n.s.	n.s.	r=0.121 (p=0.038)	n.s.	n.s.	n.s.	n.s.
Patient VAS	r=0.133 (p=0.026)	r=0.135 (p=0.023)	n.s.	r=0.131 (p=0.028)	n.s.	n.s.	n.s.	n.s.
Physician VAS	n.s.	n.s.	n.s.	n.s.	r=0.186 (p=0.023)	n.s.	n.s.	n.s.

ACPA - anti-citrullinated protein autoantibodies; BLR - basophil-lymphocyte ratio; CDAI - clinician disease activity score; CRP - C-reactive protein; DAS 28 - disease activity score 28; ELR - eosinophil-lymphocyte ratio; ESR - erythrocyte sedimentation rate; Hb - haemoglobin; MLR - monocyte-lymphocyte ratio; NLR - neutrophil-lymphocyte ratio; n.s. – not significant; RF - rheumatoid factor; SAA - serum amyloid A; SDAI - simple disease activity score; SJC - swollen joint count; TJC - tender joint count; VAS - visual analogical scale; 25OHvitD - 25-hydroxide-vitamin D.

p=0.048) haemoglobin levels (r=0.126; p=0.029) and DAS28(4V-CRP) (r=0.126; p=0.037); and BLR associated positively with DAS28(4V-CRP) (r=0.138; p=0.022), TJC (r=0.121; p=0.038) and patient VAS (r=0.131; p=0.028).

At six months of a bDMARD, NLR correlated positively with: CRP (r=0.340; p<0.001), ESR (r=0.140; p=0.018), SAA (r=0.350; p=0.008) and physician VAS (r=0.186; p=0.023). MLR also exhibited a positive association with CRP (r=0.161; p=0.007). Similarly, at six months, ELR correlated positively with CRP (r=0.120; p=0.043), RF (r=0.135; p=0.046), CDAI (r=0.180; p=0.027) and SDAI (r=0.183; p=0.025); and BLR correlated positively with platelets count (r=0.139; p=0.020). The results are shown in Table I.

Conclusion: Although weak to moderate in strength, we found significant correlations, between leukocyte formula ratios (NLR, MLR and ELR) and, not only, inflammatory markers but also disease activity measures, predominantly at baseline but also at 6 months of bDMARD. Interestingly, is of note the negative association between NLR and 25OHvitD at baseline. This study reinforced the suggested place of NLR and MLR (but also of ELR) as inflammatory markers and possible disease activity measures in RA. More studies are needed to validate this data.

P016 - MANIFESTAÇÕES REUMÁTICAS ASSOCIADAS A IMUNOTERAPIA – A EXPERIÊNCIA DE UM CENTRO

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Introdução: As proteínas CTLA-4 (cytotoxic T-lymphocyte-associated protein 4) e PD-1 (programmed cell death protein 1) integram as vias de sinalização que asseguram a tolerância a auto-antigénios e são adquiridas por certos tumores como forma de escape tumoral. A inibição destes alvos por fármacos denominados immune checkpoint inhibitors permite o reconhecimento e destruição das células neoplásicas pelos linfócitos T. Esta é a base da imunoterapia (IT), que tem demonstrado resultados promissores em tumores como carcinoma do pulmão não pequenas células, melanoma metastático e carcinoma de células renais.

No entanto, o uso destes fármacos está associado a várias reações adversas imunomediadas, nomeadamente manifestações reumáticas. As mais comuns são artralgias (1-43%) e mialgias (2-21%), embora casos de artrite, miosite, vasculite, polimialgia reumática e queixas sicca (por vezes cumprindo critérios de Síndrome de Sjögren) já tenham sido descritos.

Objetivos: Avaliar a prevalência das manifestações reumáticas nos doentes sob IT, descrevendo a clínica apresentada e a estratégia adotada.

Material e Métodos: Análise retrospetiva dos doentes sob IT seguidos na Consulta de Oncologia e Pneumologia Oncológica do Hospital Garcia de Orta, entre Abril de 2016 e Dezembro de 2018. Colhidas variáveis demográficas, data de diagnóstico, duração da IT, manifestações reumáticas identificadas, respetivo tratamento e evolução.

Resultados: No total 51 doentes realizaram IT. O nivolumab foi usado em 30 doentes, o pembrolizumab em 17, o atezolizumab em 4 (1 com tratamento prévio com nivolumab) e o ipilimumab em 1. A idade média foi 65.8±10.9 anos, sendo a maioria (84.3%) do sexo masculino. A duração mediana da terapêutica foi 6 meses [IQR 5-12], sendo a progressão da doença o principal motivo de suspensão do fármaco. Um doente sob nivolumab suspendeu o fármaco por pneumonite imunológica e outro sob pembrolizumab por hepatite tóxica. Durante a IT 11 doentes morreram por progressão da doença.

Dos 51 doentes, 5 (9.8%) desenvolveram manifestações articulares com possível associação à IT. A clínica surgiu em média 4.4 meses após início da IT, todos sob nivolumab e sem metastização óssea. A tabela 1 mostra as características destes 5 doentes.

As manifestações articulares foram tratadas com anti-inflamatórios não esteroides, analgésicos opióides e não-opióides, e em alguns casos com corticoterapia sistémica, de acordo com protocolo definido por oncologista/pneumologista assistente. Por persistência das queixas sob corticoterapia, o doente 5 foi posteriormente referenciado a consulta de Reumatologia, onde foi objetivada artrite das mãos e punhos bilateralmente, sem erosões e com fator reumatóide, anticorpos antipé tidos citrulinados e anticorpos antinucleares negativos Nenhum dos doentes suspendeu IT, tendo todos apresentado remissão das queixas articulares cerca de 2-3 semanas após instituição terapêutica. Até à data nenhum apresentou recorrência das manifestações articulares.

Conclusões: A ocorrência de manifestações reumáticas em doentes sob IT é uma realidade, embora muitas vezes subdiagnosticada. Apesar da amostra ser pequena, cerca de 10% dos doentes teve manifestações musculo-esquéticas com necessidade de intervenção farmacológica. A avaliação destes doentes por Reumatologia é fundamental para uma correta avaliação diagnóstica, com exclusão de outras etiologias possíveis, bem como para adequada orientação terapêutica. Deste modo, a criação de um protocolo entre oncologistas/pneumologistas e reumatologistas poderá constituir uma mais-valia nos cuidados a estes doentes.

TABELA I. CARACTERÍSTICAS DOS DOENTES COM MANIFESTAÇÕES REUMÁTICAS NO CONTEXTO DE IMUNOTERAPIA

Doente	Sexo/ idade	Tipo de tumor	Duração IT antes das manifestações reumáticas (meses)	Sintomas	Outras reações adversas imunomediadas
1	M/63	CPC pulmão	1	Omalgia direita agravada de noite e com movimentos	0
2	M/70	ADC pulmão	2	Artralgias ritmo inflamatório mãos e punhos	0
3	M/72	ADC pulmão	5	Artralgias ritmo inflamatório mãos, punhos e TT	0
4	M/70	ADC pulmão	2	Artralgias ritmo inflamatório mãos, punhos e ombros	0
5	M/79	ADC pulmão	12	Xerostomia / artralgias ritmo inflamatório mãos e punhos	Hipotiroidismo sob levotiroxina

Legenda: CPC – carcinoma pavimento-celular; ADC – adenocarcinoma; IT – imunoterapia; TT- tibiotársicas

P018 - NEUROLOGIC INVOLVEMENT IN ANTINEUTROPHIL CYTOPLASMIC ANTIBODY (ANCA)-ASSOCIATED VASCULITIS –EXPERIENCE FROM A PORTUGUESE CENTER

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Background: Involvement of peripheral (PNS) and central nervous system (CNS) in antineutrophil cytoplasmic antibody (ANCA)-associated vasculitis has been reported in 15-60% and 5-15% of patients (pts), respectively. PNS involvement occurs mainly in eosinophilic granulomatosis with polyangiitis (EGPA) and CNS involvement has been almost exclusively described in granulomatosis with polyangiitis (GPA). Neurologic involvement is associated with a higher morbidity and implies more immunosuppressive treatment in most patients (pts).
Objectives: Evaluate prevalence and clinical features of PNS/CNS involvement in pts with ANCA-vasculitis in a Portuguese center.
Methods: Retrospective analysis of ANCA-vasculitis pts with neurologic involvement followed in our department from January 2016 to December 2018.
Data was collected from the Portuguese database REUMA.PT and included demographic data, vasculitis subtype, date of diagnosis, neurologic manifestations and treatment approach.
Results: In total, 11 pts were identified, mostly female (7/11) with mean age of 61±13.3 years (yrs). Five pts had EGPA, 5 GPA and 1 microscopic polyangiitis (MPA). Neurologic involvement was part of disease presentation in 8 pts (5 EGPA, 3 GPA). The other 3 pts had neurologic involvement 7±2.2 yrs after vasculitis diagnosis. At the time of neurologic involvement diagnosis, Birmingham Vasculitis Activity Score was 8.8±4.3.
PNS involvement occurred in 9 pts, all presenting mononeuritis multiplex (MM). From these, 5 had EGPA, 3 GPA and 1 MPA.

CNS involvement was reported in 3 pts, 2 with GPA and 1 with EGPA. Pachymeningitis was diagnosed in 1

GPA pt with persistent headache, refractory to analgesics, and thickening and enhancement of the dura mater on postcontrast magnetic resonance imaging. Two pts had cranial mononeuropathy, 1 with EGPA and MM who developed VI palsy 2 yrs after vasculitis diagnosis and 1 pt with GPA and VII palsy at disease presentation who developed XII palsy 8 yrs later.

All pts were treated with prednisolone (1mg/kg/day), mostly in combination with other immunosuppressive drugs. The choice of the treatment was based on the age of the pt and other comorbidities. Detailed treatment of these pts and subsequent responses are shown in Table I.

In our cohort there were 2 pts with serious infections: 1 with oropharyngeal and esophageal candidiasis and another with bacteraemia to Pseudomonas aeruginosa. Both pts were under immunosuppressive agents including corticosteroids and rituximab or cyclophosphamide.

Conclusion: Neurologic involvement was part of disease presentation in most pts and the commonest manifestation was mononeuritis multiplex.

PDN was prescribed to all pts, in most cases in association with other immunosuppressive drugs. Cyclophosphamide and rituximab (RTX) were used as induction treatment, and mycophenolate mofetil, azathioprine and RTX as maintenance. Intravenous human immunoglobulin was used in pts colonized by multiresistant microorganisms/severe infection with immunosuppression and as a bridging therapy to further immunossupression. Most pts achieved clinical improvement, documented in electromyography.

TABLE I. DETAILED DATA ON PATIENTS WITH NEUROLOGIC INVOLVEMENT IN RELATION TO ANCA VASCULITIS

Patient	Gender/Age	ANCA-vasculitis	Interval from vasculitis onset to neurologic manifestations (years)	Type of neurologic involvement	Evolution
1	Male / 54	GPA	0	Mononeuritis multiplex	Improvement with CYC; disease progression after RTX + MMF (IVIg as bridging therapy until RTX retreatment)
2	Female / 69	GPA	0	Mononeuritis multiplex	Improvement with RTX + IVIg
3	Male / 43	GPA	10	Mononeuritis multiplex	Less than 6 months of treatment
4	Male / 78	GPA	6	Pachymeningitis	Improvement with RTX
5	Female / 36	GPA	0	VII palsy	Resolution with CYC
			8	XII palsy	Resolution with RTX
6	Female / 73	MPA	5	Mononeuritis multiplex	No response to RTX; improvement after 3 months on CYC
7	Female / 71	EGPA	0	Mononeuritis multiplex	Resolution with PDN
8	Male / 47	EGPA	0	Mononeuritis multiplex	Less than 6 months of treatment
9	Female / 61	EGPA	0	Mononeuritis multiplex	Improvement with CYC, followed by maintenance with AZA
10	Female / 69	EGPA	0	Mononeuritis multiplex	Improvement with IVIg followed by AZA
11	Female / 70	EGPA	0	Mononeuritis multiplex	Improvement with IVIg
			2	VI palsy	Resolution with RTX

Legend – GPA - granulomatosis with polyangiitis; MPA - microscopic polyangiitis; EGPA - eosinophilic granulomatosis with polyangiitis; CYC - cyclophosphamide; RTX – rituximab; MMF – mycophenolate mofetil; IVIg – intravenous human immunoglobulin; PDN – prednisolone; AZA – azathioprine

P022 - MONOCYTE-LYMPHOCYTE RATIO AND PLATELET-LYMPHOCYTE RATIO: ROLE AS BIOMARKERS OF DISEASE ACTIVITY IN PSORIATIC ARTHRITIS PATIENTS

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Background: Monocyte-lymphocyte ratio (MLR), neutrophil-lymphocyte ratio (NLR) and platelet-lymphocyte ratio (PLR) had emerged as good indicators of systemic inflammation status in a variety of diseases like cancer, cardiovascular and autoimmune diseases. Furthermore, some recent data showed relevant association of this haematological parameters with others traditional inflammatory measures as serum c- reactive protein (CRP) levels in rheumatic patients, suggesting their use as a valuable indicator of disease activity.

Objectives: To assess the association between the NLR, MLR, eosinophil-lymphocyte ratio (ELR), basophils-lymphocyte ratio (BLR) and PLR with disease activity and functional parameters in psoriatic arthritis (PsA) patients.

Methods: An observational cross-sectional study was performed in patients with psoriatic arthritis before introduction of a bDMARD, followed at our Rheumatology department until December 2018. Demographic, clinic and laboratory information were collected from the national database (Reuma.pt). Available data of blood cell counts were consulted and NLR, MLR, ELR, BLR and PLR were calculated by dividing neutrophil, monocyte, eosinophil, basophils and platelet count by lymphocyte count, respectively. The following disease activity and functional scores were also registered: CRP and ESR levels, DAS28 4V and 3V (ESR and CRP), HAQ, BASDAI, ASDAS-CRP, BASFI, BASMI, swollen and tender joints counts (SJC and TJC), SPARCC index, patient global assessment (PtGA) and physician global assessment (PGA) rated on a visual analogue scale (VAS). Correlations between variables were evaluated with Spearman's test. The statistical analysis was performed using SPSS 21.0 software. Differences were considered statistically significant at $p<0.05$.

Results: A total of 83 patients were enrolled. Forty-three were females (51.8%) and forty were males

(48.2%). The mean age was 47 years (±10.9) and the median disease duration at start of biological therapy was 6.9 years (min:1.4; max:32.4). In total, 67.5% of the patients had axial involvement (n=56), 91.6% articular involvement (n=76) and 43.4% enthesopathic involvement (n=36). Almost all patients fulfilled the CASPAR criteria for PsA (n=78; 94%). Thirty patients presented with dactylitis (36%). Most were non-smoking (n=48; 57.8%) and most didn't have history of alcohol consumption (n=55; 66.3%). According to ASDAS criteria, 25 patients (30.1%) had high disease activity and 45 patients (54.2%) very high disease activity. At time of evaluation, 71.1% were receiving csDMARDs. NSAIDs and corticosteroids were prescribed in 80.7% and 54.2% of the patients, respectively. We found statistically significant correlation between MLR values and CRP levels (r=0.276, p=0.014). MLR did not correlate with ESR levels, DAS28 4V and 3V (ESR and CRP), HAQ, BASDAI, ASDAS-CRP, BASFI, BASMI, SJC, TJC, SPARCC, PtGA and PGA. PLR values also had weak correlation with ESR (r=0.340, p=0.002), DAS 4V-ESR (r=0.260; p=0.027) and with DAS 3V-ESR (r=0.290, p=0.012). There was no statistically significant correlation between PLR values and others disease parameters. No significant correlation was found between NLR, ELR and BLR and the functional and disease activity scores evaluated.

Conclusion: Our study showed that MLR had a positive association with CRP and PLR with ESR, DAS 4V-ESR and DAS 3V-ESR. Evaluation of this novel inflammatory biomarkers may represent a simple, cost-effective and useful tool in monitoring disease activity in PsA patients.

P023 - TIME-COURSE CHANGE OF NEUTROPHIL-LYMPHOCYTE RATIO, MONOCYTE-LYMPHOCYTE RATIO AND PLATELET-LYMPHOCYTE RATIO IN PSORIATIC ARTHRITIS PATIENTS AND RESPONSE TO BIOLOGIC THERAPY

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Background: Recently, systemic inflammation has been shown to be a key determinant of prognosis. Neutrophil-lymphocyte ratio (NLR), monocyte-lymphocyte ratio (MLR) and platelet-lymphocyte ratio (PLR) has been related to inflammation status and suggested as additional markers of response to bDMARDs in patients with rheumatoid arthritis. However, few studies were yet developed about this subject in psoriatic arthritis (PsA).

Objectives: To investigate the time-course change of NLR, MLR and PLR levels in PsA patients after 6 and 12 months of bDMARD therapy and to evaluate their utility in monitoring response to biologic agents.

Methods: An observational study was performed in patients with PsA under bDMARD, followed at our Rheumatology department until December 2018. Demographic and clinical data were collected from Reuma.pt. CRP, ESR and total blood count were consulted before and after 6 and 12 months of biologic treatment and NLR, MLR and PLR were calculated by dividing neutrophil, monocyte and platelet count by lymphocyte count, respectively. Disease activity was evaluated with DAS28 and ASDAS. The variation of each parameter was calculated as the difference between the levels registered at 6 and 12 months and the baseline and presented as ∅. Correlations between variables were evaluated with Spearman's test.

Results: 83 patients were included. 43 were females (51.8%). The mean age at diagnosis was 41 years (±11.3) and the median disease duration at start of bDMARD was 6.9 years (min:1.4; max:32.4). In total, 67.5% of the patients had axial involvement (n=56), 91.6% articular involvement (n=76) and 43.4% enthesopathic involvement (n=36). At the baseline, 25 patients (30.1%) had high disease activity and 45 patients (54.2%) very high disease activity according to ASDAS criteria. The most used bDMARD was etanercept (n=29; 35%), followed by golimumab (n=26; 31%), adalimumab (n=16; 19%) and infliximab (n=8; 10%). Certolizumab was administered to 2 patients and secukinumab to others 2 patients. Fifty-nine patients were concomitantly treated with csDMARDs. The median value of CPR was 1.5mg/dL [0.03-30], 0.26 [0.03-11] and 0.37 [0.02-19] at baseline, 6 and 12 months, respectively. The median value of ESR was 33mm/hr [4-98], 11 [2-75] and 10 [1-68] at baseline, 6 and 12 months, respectively. We realize that NLR, MLR and PLR decreased after 6 months of treatment and remained relatively stable at 12 months (NLR median: 2.6 [0.1-8.8], 1.6 [0.5-5.3], 1.6 [0.5-8]; MLR median: 0.32 [0.11-250], 0.23 [0-7.4], 0.25 [0.05-1]; PLR median: 132 [69.6-342.5], 97.6 [33.4-415.1], 98.6 [38.3- 528.6] at baseline, 6 and 12 months, respectively). A significant positive correlation was found be-

tween ØNLR and ØCPR at 6 months (r=0.272; p=0.016) and also between ØMLR and ØCPR at 6 and 12 months (r=0.309, p=0.006; r=0.364, p=0.002). ØPLR showed a statistically significant correlation only with ØESR at 6 months (r=0.312; p=0.006). No correlation were found between ØNLR, ØMLR and ØPLR with ØDAS28 or between ØNLR, ØMLR and ØPLR with ØASDAS at evaluation of 6 and 12 months.
Conclusion: Our data showed that NLR, MLR decreased promptly in parallel with decrease of CRP and PLR with ESR for up 6 months of therapy with biologics. This results, in agreement with the literature, suggests that NLR, MLR and PLR may be seen as a useful marker for demonstrating systemic inflammation in PsA patients. Further studies are needed to better emphasize the importance of these parameters and to evaluate their utility to monitor the effectiveness of biologic therapy.

P024 - EVENTOS CARDIOVASCULARES NOS DOENTES COM GOTA TRATADOS COM FEBUXOSTATE

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Introdução: O febuxostate é um potente inibidor da xantina oxidase aprovado para o tratamento de gota crónica. No entanto, existe alguma controvérsia a respeito de um potencial aumento do risco cardiovascular associado ao uso do fármaco.
Objetivo: Avaliar o perfil de segurança do febuxostate, analisando a ocorrência de eventos cardiovasculares após a sua introdução.
Métodos: Estudo observacional dos doentes com artropatia gotosa seguidos no nosso serviço de Reumatologia sob tratamento com febuxostate 80mg id. Os dados sociodemográficos e clínico-laboratoriais foram obtidos através da consulta dos processos hospitalares. Os eventos cardiovasculares considerados foram síndrome coronário agudo (SCA), insuficiência cardíaca congestiva (ICC), acidente vascular cerebral (AVC), arritmia e morte por causa cardiovascular. Para a análise estatística foram utilizados os testes Mann-whitnney e qui-quadrado. O nível de significância estabelecido foi $p<0.05$.
Resultados: Nós identificamos 36 doentes com diagnóstico de gota sob tratamento com febuxostate. Cinco doentes foram excluídos por não apresentarem um período mínimo de 3 meses de seguimento. A idade média era de 64±14 anos e a duração média de doença de 13±9 anos. Vinte e dois eram homens (71%). A presença de tofos gotosos confirmou-se em 19 doentes (61%). Vinte e três doentes apresentavam hipertensão arterial (HTA) e excesso ponderal (74%), 22 dislipidemia (71%), 16 eram diabéticos (52%) e 13 tinham história de tabagismo (42%). Treze doentes apresentavam doença renal crónica (DRC) (42%). A respeito dos eventos cardiovasculares conhecidos previamente ao início de febuxostate, 3 doentes tinham antecedentes de SCA, 2 tinham sofrido um AVC, 2 apresentavam doença arterial periférica e 3 tinham ICC estabelecida. Não se verificou nenhum caso de intolerância ou reação alérgica ao fármaco. Após início de febuxostate, 4 doentes desenvolveram um evento cardiovascular: 1 apresentou episódio de síncope por bloqueio auriculoventricular completo paroxístico que estabilizou após colocação de pacemaker, 1 doente apresentou angina instável tendo sido submetido a angioplastia com implante de stent coronário, registou-se 1 caso de descompensação de ICC e um caso de novo de fibrilação auricular e ICC associada. Não se verificaram eventos cardiovasculares fatais. Na análise comparativa segundo o desenvolvimento de um evento cardiovascular posterior à introdução de febuxostate, verificamos uma associação positiva de forma significativa da ocorrência de evento com a presença de DRC (100% vs 33%; p=0.02). Não houve relação estatisticamente significativa com presença de história prévia de evento cardiovascular, idade, sexo ou fatores de risco cardiovasculares modificáveis.
Conclusão: A nossa análise confirmou que a existência de comorbilidades é comum nos doentes com gota, podendo constituir fatores determinantes na decisão terapêutica. Quatro doentes da nossa amostra (13%) apresentaram um evento cardiovascular de novo após início de febuxostate. Os nossos dados parecem sugerir que o seu desenvolvimento pode associar-se a antecedentes de DRC, pelo que o uso do fármaco deve ser prudente nesse contexto clínico.

P025 - PRINCIPAIS INDICAÇÕES E EFICÁCIA DO FEBUXOSTATE NOS DOENTES COM ARTROPATIA GOTOSA- EXPERIÊNCIA DE UM CENTRO HOSPITALAR

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Introdução: O alopurinol é o clássico hipouricemian-

te utilizado no tratamento de artropatia gotosa. No entanto, o tratamento com febuxostate parece particularmente útil em caso de intolerância ao alopurinol ou em caso de insuficiência renal crônica.
Objetivo: Avaliar a eficácia do febuxostate no tratamento de gota e a influência de características clínicas na resposta terapêutica.
Métodos: Estudo retrospetivo dos doentes com artropatia gotosa seguidos no nosso serviço de Reumatologia sob tratamento com febuxostate 80mg id. O principal alvo terapêutico estabelecido foi ácido úrico sérico <6mg/dL. Os dados epidemiológicos e clínicos foram obtidos através da consulta dos registos hospitalares. Para a análise estatística foram usados teste paramétricos e não paramétricos. O nível de significância estabelecido foi $p<0.05$.
Resultados: Nós identificamos 36 doentes com diagnóstico de gota sob tratamento com febuxostate desde 2010. Cinco doentes foram excluídos por não apresentarem um período mínimo de 3 meses de seguimento, pelo que a nossa amostra totalizou 31 doentes. Vinte e dois (71%) eram homens e nove (29%) mulheres, com uma idade média de 64±14 anos e uma duração média de doença de 13±9 anos. O padrão de envolvimento era poliarticular na maioria dos doentes, sendo que 2 doentes apresentavam uma forma oligoarticular. Dezanove doentes tinham tofos gotosos (61%). Na maioria dos casos, o febuxostate foi iniciado após o alopurinol, sendo os motivos de switch mais frequentes: reação cutânea a alopurinol (n=14;45%), refratariedade a alopurinol (n=11;35,5%), insuficiência renal (n=3;10%) ou hepatotoxicidade a alopurinol (n=2;6.5%). Febuxostate foi usado como fármaco de 1ª linha somente em 1 doente, tratando-se de um transplantado renal. Vinte e três doentes tinham hipertensão arterial e excesso ponderal (74%), 22 dislipidemia (71%), 16 diabetes mellitus (52%), 13 história de tabagismo (42%) e 13 doença renal crónica (DRC). A mediana do nível de ácido úrico no baseline era de 9.6mg/dL (min:6.8; max:16). Em 65% dos casos (n=20) atingiu-se o alvo de uricemia sérica <6mg/dL, num período de tempo mediano de 69 dias (min 10; max 1202). Em 48% dos doentes alcançou-se o nível sérico de ácido úrico <5mg/dL, em um período de tempo mediano de 132 dias (min:13; max: 902). Não se verificaram diferenças estatisticamente significativas na taxa de resposta terapêutica (para alvo de 6 ou 5mg/dl) entre os doentes segundo variáveis como sexo, idade, duração da doença, presença de tofos, comorbilidades cardiovasculares, DRC ou níveis de hiperuricemia basais.
Conclusão: A maioria dos doentes apresentava doença poliarticular tofácea, o que revela que o febuxostate permanece como importante opção de 2ª linha para casos de difícil controlo ou em caso de toxicodermia ao alopurinol. Ao contrário dos achados de alguns estudos que apontam para uma influência dos níveis de ácido úrico sérico no baseline com a eficácia do febuxostate, nós não encontramos nenhuma relação associada às características clínicas ou laboratoriais. Os resultados satisfatórios da eficácia do febuxostate e aquisição de maior experiência clínica nos próximos anos poderão vir a ampliar a sua utilização.

P026 - THE ROLE OF NEUTROPHIS TO LYMPHOCYTE RATIO (NLR), MONOCYTE TO LYMPHOCYTE RATIO (MLR), PLATELET TO LYMPHOCYTE RATIO (PLR), EOSINOPHIL TO LYMPHOCYTES RATIO (ELR) AND BASOPHILE TO LYMPHOCYTE RATIO (BLR) IN ASSESSING DISEASE ACTIVITY IN SPONDYLOARTHRITIS

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Background: Neutrophil to lymphocyte ratio (NLR), monocyte to lymphocyte ratio (MLR), platelet to lymphocyte ratio (PLR), eosinophil to lymphocyte ratio (ELR) and basophile to lymphocyte ratio (BLR) have been demonstrated to be promising systemic inflammation markers. NLR, MLR and PLR have been associated with disease activity in Spondyloarthritis (SpA) but the results remain conflicting.
Objectives: We aim to determine the role of NLR, MLR, PLR, ELR and BLR in assessing disease activity in SpA.
Methods: Observational retrospective study was performed including consecutive patients with the diagnosis of SpA (according to ASAS classification criteria) followed at our Rheumatology Department. Demographic, clinical (including BASDAI, BASFI, ASDAS ESR and ASDAS CRP indices) and laboratorial data were collected from our national database at baseline and 6 months after initiation of a tumour necrosis factor inhibitor (TNFi). Correlations between variables were studied using Spearman correlation analysis and comparison between groups was performed using Wilcoxon test.

Results: The mean age of patients (n=297) was 41 years old (± 12), 160 (53.9%) were males with median disease duration of 12.4 (IQR 14.8) years. Two hundred and seven patients (69.7%) had Ankylosing Spondylitis, 26 (8.8%) Inflammatory Bowel Disease related SPA and 36 (12.1%) Undifferentiated SpA. Seventy-three (24.7%) patients were taking glucocorticoids and regarding conventional synthetic disease-modifying anti-rheumatic drugs (csDMARDs) use before starting the TNFi: 188 (63.3%) were not under any csDMARD and the remaining ones were under Sulfasalazine (70, 23.6%), Methotrexate (MTX) (21, 7.1%), Azathioprine (AZA) (5, 1,7%), Leflunomide (1, 0.3%) or associations between Sulfasalazine and AZA or MTX. Regarding the iTNF the majority of patients initiate Adalimumab (n=168, 28.6%), Golimumab (n= 61, 25.6%) or Infliximab (n= 57, 23.9%). The majority of patients had very high or high disease activity at baseline (59.6% and 31.3%, respectively); mean ASDAS CRP was 3.85 (± 0.99), mean ESR was 30.1 mm/h (± 21.9) and mean CRP was 36.9 mg/L (±113.9). The post-treatment mean ESR, CRP, ASDAS-CRP, ASDAS-ESR and BASDAI were significantly lower than mean baseline values, as they were also for NLR, MLR and PLR ($p<0.01$).

At the baseline evaluation, in anti-TNF naïve patients, NLR and MLR were positively correlated with the majority of parameters evaluated: ESR level ($r=0.322$; $r=0.203$, $p<0.01$ respectively), CRP level ($r=0.475$; $r=0.221$, $p<0.01$ respectively), ASDAS-CRP ($r=0.255$; $r=0.192$, $p<0.01$ respectively), ASDAS-ESR ($r=0.257$; $r=0.206$, $p<0.01$ respectively) and BASMI ($r=0.288$; $r=0.150$, $p<0.01$ respectively). No correlations were found with BASDAI. PLR was positively correlated with ESR level ($r=0.379$, $p<0.01$), CRP level ($r=0.331$, $p<0.01$), ASDAS-CRP (0.215, $p<0.01$) and ASDAS-ESR ($r=0.208$, $p<0.01$). No correlations were found between those parameters and ELR or BLR. At the evaluation 6 months after introducing a TNFi, we found less and weaker correlations than in naïve patients: NLR and PLR correlate positively with CRP ($r=0.302$; 0.315, $p<0.01$ respectively) and, reaching lower statistical significance, PLR correlate also with ASDAS-ESR (0.156, $p<0.05$); NLR with BASMI (0.184, $p<0.05$) and ESR (0.179, $p<0.05$); MLR with CRP (0.173, $p<0.05$).

Conclusion: NLR, MLR and PLR may reflect disease activity and could represent future inexpensive potential parameters to evaluate disease activity or severity in SpA.

P027 - THE LUNG IN SJOGREN'S SYNDROME PATIENTS – AN OVERVIEW OF CLINICAL CHARACTERISTICS AND DISEASE OUTCOME

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Background: Lung involvement has been reported in 10-20% of patients (pts) with primary Sjögren's syndrome (pSS) and mostly affecting parenchyma and airways. Its occurrence significantly impacts both quality of life and mortality in pSS pts.

Objectives: To characterize lung involvement in a cohort of pSS pts and present our experience with immunosuppressive drug treatment for pSS-interstitial lung disease (ILD).

Methods: Retrospective analysis of pSS pts followed in our Rheumatology department until December 2018. Lung involvement was based on high resolution computed tomography and/or histopathological alterations described in the spectrum of pSS-associated lung disease. Patients with and without lung disease were compared using parametric and non-parametric tests.

Results: In total, 137 pSS pts that fulfilled the European-American consensus criteria 2002 were identified, 130 (94.9%) females, with mean age at pSS diagnosis of 56.1 (±12.2) years; median disease duration of 6 [IQR 3-10] years and median follow-up 6 [IQR 3-10.25] years. Antinuclear antibodies (ANA) were positive in 113 (82.5%) pts, with 95/134 (70.9%) pts presenting positive anti-SSA and 60/128 (46.9%) anti-SSB. Specific immunoassays were performed in 82 pts, allowing identification of anti-Ro52 antibody in 48 (58.5%) of them. Rheumatoid factor was positive in 48/91 (52.7%).

During follow-up 3 pts died, one of them due to ILD progression and the other 2 due to sepsis (respiratory and abdominal), both treated with immunosuppressive drugs.

Lung involvement occurred in 17 (12.4%) pts. The median time to lung disease was 2 years [IQR 0-8] after pSS diagnosis.

Mean EULAR SS disease activity index (ESSDAI) at the time of lung involvement diagnosis was 13.1 (±5).

Main differences between pts with and without lung involvement are shown in Table I.

Regarding the pattern of lung involvement, 9 (52.9%) pts had ILD, 6 (35.3%) isolated bronchiectasis and 2 (11.8%) follicular bronchiolitis.

In ILD pts, non-specific interstitial pneumonia (NSIP) was documented in 6 pts, lymphocytic interstitial pneumonia in 2 and 1 pt had unclassifiable ILD pattern with lymphocytic alveolitis in bronchoalveolar lavage. One of the pts with NSIP pattern later developed radiographic characteristics suggestive of usual interstitial pneumonia (UIP).

Six ILD pts were treated with immunosuppressive drugs. One received cyclophosphamide (CYC), 2 azathioprine (AZA) and 4 mycophenolate mofetil (MMF). From pts receiving MMF, 1 was previously treated with CYC as induction treatment and the other with AZA, but with inefficacy.

Rituximab (RTX) was given to 1 pt with refractory arthritis and new ILD onset. After 11 years on RTX (total 10 cycles) this pt complained of persistent dyspnoea and fatigue on minor exertion (cardiac causes excluded), with onset of subtle honeycombing in high resolution computed tomography. At this point pirfenidone was added to RTX, with clinical improvement.

TABLE I. COMPARISON BETWEEN PTS WITH AND WITHOUT LUNG INVOLVEMENT

	Lung involvement (n=17)	No-lung involvement (n=120)	p-value
Female	17 (100%)	113 (94.2%)	0.31
Age at pSS diagnosis (mean±SD)	60.9±8.6	55.4±12.4	**0.04**
Disease duration (median IQR)	8 [2.5-12]	5 [3.9.75]	0.24
ANA	15 (88.2%)	99 (82.5%)	0.56
Anti-Ro52	7 (63.6%)	41 (57.7%)	0.72
Hypergammaglobulinemia at some point during follow-up	10 (58.8%)	48 (40%)	0.14
Constitutional involvement at some point during follow-up	6 (35.3%)	5 (4.2%)	**<0.001**

Legend: pSS - primary Sjögren's syndrome; ANA- antinuclear antibodies

TABLE II. EVOLUTION OF PATIENTS WITH INTERSTITIAL LUNG DISEASE TREATED WITH IMMUNOSUPPRESSIVE DRUGS

Patient	Current immunosuppression	Baseline		6-12 months		≥ 24 months		Lung CT 6-12 months	Lung CT ≥ 24 months
		FVC (%)	DLCO (%)	FVC (%)	DLCO (%)	FVC (%)	DLCO (%)		
1†	AZA	52.8	27.7	42.1	7.4	35.2	Unable to perform	Progression, assuming UIP pattern	Stable
2	MMF	87.6	69.3	95	72.7	-	-	-	-
3	MMF	37.1	Unable to perform	45	Unable to perform	-	-	Progression	-
4	MMF	98.6	84.7	112.2	90	-	-	Improvement	-
5	MMF	76,7	39,6	*	*	*	*	*	*
6	RTX	45.8	40.9	-	-	46.5	36.7	Stable	Progression

† Patient 1 died due to lung disease progression, after 3 years on AZA and before there was experience with anti-fibrotic drugs

*This patient is under treatment for less than 6 months and has no follow-up assessment yet

Legend: AZA – azathioprine; MMF – mycophenolate mofetil; RTX – rituximab; FVC – forced vital capacity; DLCO- gas transfer; CT – computed tomography; UIP – usual interstitial pneumonia

Detailed lung function and imaging evolution of pSS-ILD pts is shown in Table II.

Conclusions: Lung involvement occurred in 12.4% of our cohort and was associated with older disease at SS diagnosis and presence of constitutional involvement.

Small airways disease and ILD had nearly the same prevalence and in the ILD sub-group, NSIP was the commonest pattern.

Despite the small number of ILD pts receiving immunosuppression, these drugs seemed to be associated with disease stabilization in most of them. Only 1 pt with UIP pattern had disease progression and eventually died.

P029 - RITUXIMAB NO TRATAMENTO DA DOENÇA PULMONAR INTERSTICIAL ASSOCIADA A ARTRITE REUMATÓIDE

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Introdução: A Doença Pulmonar Intersticial (DPI) constitui uma manifestação extra-articular comum e uma causa major de morbilidade e mortalidade na Artrite Reumatóide (AR), sendo ainda escassa a evidência da utilização do rituximab (RTX) nesse contexto.

Métodos: Estudo monocêntrico e retrospetivo, incluindo todos os doentes tratados com RTX por DPI associada à AR, seguidos num Centro Hospitalar Universitário. O padrão de DPI foi definido por tomografia computorizada de alta resolução (TC-AR) ou biópsia pulmonar e foram obtidos dados relativos à monitorização da doença articular e pulmonar [TC-AR, capacidade vital forçada prevista (CVFprev), capacidade de difusão do monóxido de carbono prevista (DLCOprev) e prova da marcha dos 6 minutos (PM6M)] aos 6, 12, 24 e 36 meses de tratamento com RTX. A associação entre as diferentes variáveis recolhidas foi estabelecida através do coeficiente de correlação de Spearman.

Resultados: Foram incluídos 24 doentes [19 do sexo feminino (79.2%), idade média de 64±8.9 anos, 17 (70.8%) seropositivos para fator reumatóide, 23 (95.8%) seropositivos para anticorpos anti-peptídeos citrulinados cíclicos (ACPAs), 4 (16.7%) fumadores ativos e 4 (16.7%) ex-fumadores], com duração média de AR de 12±7.8 anos e duração média de DPI de 55.3±40.7 meses. Relativamente ao padrão de DPI, verificou-se um padrão de pneumonia intersticial usual

em onze pacientes (45.8%), pneumonia intersticial não específica em quatro (16.7%), bronquiolite folicular em três (12.5%) e outros padrões em seis pacientes (25%). A tabela 1 ilustra a evolução da resposta ao RTX a nível pulmonar.

A DLCOprev basal correlacionou-se com a DLCOprev aos 6 meses (r=0.929; p=0.030), aos 12 meses (r=0.905; p=0.002), e aos 24 meses (r=0.900; p=0.037). Além disso, aos 12 meses, a variação da DLCOprev correlacionou-se negativamente com a carga tabágica total (r=-0.768; p=0.009) e positivamente com o título basal de ACPAs (r=0.685; p=0.029). Verificou-se, ainda, uma forte correlação entre a DLCOprev aos 24 meses e a percentagem basal de células NK (r=0.900; p=0.037).

Por outro lado, a CVFprev aos 6 meses correlacionou-se negativamente com a proteína C-reativa basal (r=-0.745; p=0.013) e positivamente com a idade (r=0.793; p=0.06). Aos 12 meses, a CVFprev correlacionou-se com a pressão parcial de oxigénio inicial (r=0.717; p=0.030), a DLCOprev e CVFprev iniciais [r=0.648 (p=0.043) e r=0.867 (p=0.001), respetivamente]. Já aos 24 meses, a CVFprev correlacionou-se negativamente com as seguintes variáveis: DAS 28 (4V) (r=-0.881; p=0.004); HAQ (r=-0.952; p<0.001) e escala de Borg de dispneia na PM6M (r=-0.975; p=0.005).

Oito doentes (33.3%) suspenderam definitivamente o tratamento com RTX: três (37.5%) por intercorrências infeciosas e três faleceram (um por infeção pulmonar, um por neutropenia febril e outro por motivo desconhecido).

TABELA I. EVOLUÇÃO DA RESPOSTA AO RITUXIMAB A NÍVEL PULMONAR

	6 meses	12 meses	24 meses	36 meses
DLCOprev (n)	7	8	5	1
Melhoria ou Declínio até 10% (vs baseline)	5 (71.4%)	6 (75%)	5 (100%)	1 (100%)
Declínio >=10% (vs baseline)	2 (28.6%)	2 (25%)	0 (0%)	0 (0%)
CVFprev (n)	10	10	7	2
Melhoria ou Declínio até 15% (vs baseline)	8 (80%)	10 (100%)	7 (100%)	2 (100%)
Declínio >=15% (vs baseline)	2 (20%)	0 (0%)	0 (0%)	0 (0%)
TC-AR (n)	10	6	6	3
Melhoria ou estabilização (vs baseline)	8 (80%)	6 (100%)	5 (83.3%)	3 (100%)
Agravamento (vs baseline)	2 (20%)	0 (0%)	1 (16.6%)	0 (0%)

Legenda: DLCOprev - Capacidade de Difusão de Monóxido de Carbono prevista; CVFprev - Capacidade Vital Forçada prevista; TC-AR - Tomografia computorizada torácica de alta resolução.

Conclusão: Os nossos resultados reforçam os dados positivos que o RTX tem apresentado no tratamento da DPI associada à AR. Maior atividade basal da doença articular e maior carga tabágica associaram-se a pior resposta funcional respiratória ao RTX. Por outro lado, melhores parâmetros funcionais respiratórios basais, títulos mais elevados de ACPAs, maior percentagem de células NK e idade mais avançada associaram-se a melhor resposta ao RXT.

P036 - SERUM SPHINGOLIPIDS AS CANDIDATE BIOMARKERS IN RHEUMATOID ARTHRITIS

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Background: The identification of rheumatoid arthritis (RA) serum biomarkers with applicability to early diagnosis and treatment stratification is a relevant unmet medical need. Various lipid species, including sphingolipids, which are implicated in inflammatory pathways, were identified to be significantly increased in the synovial fluid (SF) of RA patients and have been shown to be associated with inflammatory activity in other diseases.

Objectives: To identify serum sphingolipids as candidate serum biomarkers in RA.

Methods: We performed lipidomics analyses on Ceramide (Cer), Monohexosylceramide (MHCer) and Sphingosine (So) using high-performance liquid chromatography-mass spectrometry in the serum of 19 established RA, 18 early arthritis patients who latter developed classification criteria for RA, 17 early arthritis patients who did not develop classification criteria for RA, 12 established spondyloarthritis (SpA) patients and 20 age and gender matched healthy controls. We carried out multiple regression analyses considering age at diagnosis, gender, DAS-28, medication and disease duration as independent variables to compare patient

groups with controls.
Results: Patients with established RA had increased levels of Cer, MHCer and So vs. controls, when including age and gender in the analyses. MHCer was also increased when additionally controlling for medication (conventional disease-modifying anti-rheumatic drugs and corticoid treatment). On the contrary, SpA patients, who were all on nonsteroidal anti-inflammatory drugs, had significantly decreased levels of Cer, compared to controls, in both analyses.
Conclusions: Our results suggest that there is an increase in certain sphingolipid levels in the serum of RA patients, in line with previous observations on SF. This suggests that sphingolipids play a role in the pathophysiology of RA and should be further explored as serum biomarkers in RA.

P045 - WHAT IS AXIAL SPONDYLOARTHRITIS? A LATENT CLASS AND TRANSITION ANALYSIS IN THE SPACE AND DESIR COHORTS

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Background: Axial spondyloarthritis (axSpA) is a disease with a rather heterogeneous presentation that may be difficult to diagnose. Classification criteria, such as the ASAS criteria, which have been developed and validated against the gold-standard 'expert diagnosis', exist, but may suffer from inappropriate circularity because features deemed important by experts (e.g. sacroiliitis on MRI) may have easily got a too prominent, and therefore biased, role. If classification criteria are used inappropriately to confirm a diagnosis, overdiagnosis ('too much SpA') may be an unwarranted consequence.
Objectives: To gain an unbiased insight into the concept of axSpA, by circumventing expert opinion and investigating its 'latent constructs': We examined the SpA-features' mutual statistical coherence, established the unbiased 'Gestalt' of SpA, and evaluated how well the ASAS axSpA classification criteria capture these 'latent constructs'.
Methods: Two independent cohorts of patients (pts) with early onset chronic back pain (SPACE cohort) and inflammatory back pain (IBP) (DESIR cohort) were included. Latent class analysis (LCA) (different than a cluster analysis) was used to estimate the latent (i.e. unobserved) 'Gestalt' of axSpA by modelling the covariance of the observed SpA features (without 'a priori' assumptions on their 'weights'). The selected best LCA model splits axSpA into a number of (clinically meaningful) classes with best data fit. Each class was labelled by us and named according to most prominent features. The latent axSpA classes were then used as 'gold-standard' against which the ASAS axSpA, pSpA (ignoring IBP) and both (SpA criteria) were tested. Finally, 5-year follow-up data from DESIR were used to perform a latent transition analysis (LTA) in order to examine if patients change classes over 5-year time.
Results: In total, data of 465 (SPACE) and 576 (DESIR) pts were analyzed. SPACE yielded 4 latent classes (Table I). The 'Axial' class characterized by highest likelihood on abnormal imaging and HLA-B27-positivity; the 'IBP+Peripheral' class had 100% likelihood of IBP in association with peripheral signs. The 'At risk' class is anchored on a positive family history and HLA-B27 positivity in association with IBP; and the 'No SpA' class had very low likelihoods for all SpA-features which were correlated. The independent analysis in DESIR (without 'no-SpA' patients) yielded identical latent classes ('Axial':19%; 'IBP+Peripheral':27% and 'At risk':55%) (Table II). The ASAS axSpA criteria, tested in SPACE ('No SpA' absent in DESIR), captured 67% of the patients in the 'Axial' and 'IBP+Peripheral' classes ('latent gold-standard'), but sensitivity was better (87%) if axSpA and pSpA criteria were combined. Of note, the axSpA criteria captured only 4% of the patients from the 'No SpA' class. Importantly, the LTA suggests that transition between classes over time was highly unlikely. 'Axial' and 'IBP+Peripheral' patients did not switch and only 11% of 'At risk' pts had switched to 'IBP+Peripheral' after 5 years.
Conclusion: The 'Gestalt' of axial spondyloarthritis comprises three distinguishable clinical entities ('pure axial SpA', 'axial SpA with peripheral signs, and 'axial

TABLE I. LATENT CLASS ANALYSIS MODEL IN SPACE (N=465)

	'Axial' (P*=15.9%) Estimated probability (95% CI)	'IBP+Peripheral' (P*=20.0%) Estimated probability (95% CI)	'At risk' (P*=24.3%) Estimated probability (95% CI)	'No SpA' (P*=39.7%) Estimated probability (95% CI)
Inflammation on MRI-SIJ (ASAS)	***0.74 (0.52; 0.88)***	0.04 (0.01; 0.14)	0.00 (0.00; 1.00)	0.03 (0.01; 0.08)
Radiographic sacroiliitis (mNY)	**0.32 (0.19; 0.49)**	0.09 (0.04; 0.20)	0.01 (0.00; 0.32)	0.03 (0.01; 0.08)
Elevated CRP (≥ 6 mg/dL)	**0.49 (0.32; 0.65)**	0.22 (0.13; 0.34)	0.21 (0.13; 0.32)	0.20 (0.15; 0.28)
BME on MRI-Spine (≥ 5 lesions)	**0.25 (0.14; 0.42)**	0.02 (0.00; 0.18)	0.00 (0.00; 1.00)	0.00 (0.00; 0.11)
≥ 1 syndesmophyte on X-spine	0.03 (0.01; 0.11)	0.06 (0.03; 0.14)	0.00 (0.00; 1.00)	0.04 (0.02; 0.08)
Good response to NSAIDs (ever)	*0.59 (0.41; 0.75)*	***0.85 (0.72; 0.93)***	0.25 (0.14; 0.42)	0.20 (0.14; 0.29)
Peripheral arthritis (ever)	0.17 (0.09; 0.30)	**0.44 (0.30; 0.58)**	0.04 (0.01; 0.15)	0.10 (0.06; 0.17)
Dactylitis (ever)	0.02 (0.00; 0.17)	**0.18 (0.11; 0.29)**	0.00 (0.00; 1.00)	0.03 (0.01; 0.07)
Heel enthesitis (ever)	0.10 (0.04; 0.25)	***0.66 (0.50; 0.79)***	0.13 (0.06; 0.24)	0.04 (0.01; 0.11)
HLA-B27	***0.84 (0.67; 0.93)***	0.33 (0.23; 0.46)	*0.69 (0.24; 0.94)*	0.00 (0.00; 1.00)
Family history of SpA	0.38 (0.24; 0.54)	0.50 (0.38; 0.62)	***0.71 (0.56; 0.82)***	0.21 (0.10; 0.38)
Psoriasis (ever)	0.10 (0.04; 0.22)	**0.31 (0.21; 0.43)**	0.02 (0.00; 0.23)	0.08 (0.05; 0.14)
Uveitis (ever)	**0.13 (0.06; 0.24)**	0.07 (0.03; 0.17)	0.12 (0.06; 0.22)	0.02 (0.00; 0.11)
IBD (ever)	0.03 (0.01; 0.16)	**0.15 (0.08; 0.25)**	0.00 (0.00; 1.00)	0.10 (0.06; 0.17)
Inflammatory back pain	*0.68 (0.55; 0.79)*	***1.00 (0.00; 1.00)***	*0.66 (0.53; 0.76)*	0.49 (0.39; 0.59)

* Probability of the latent class. Values are the conditional probability (95% confidence interval) for each SpA feature positivity within each latent class (range: 0-1). Values in **bold** highlight dominant features between latent classes. Values in *italic* highlight dominant features (probability >50%) within each class. BME, bone marrow edema; IBD, Inflammatory bowel disease.

TABLE II. LATENT CLASS ANALYSIS MODEL IN DESIR (N=576)

	'Axial' (P*=18.8%) Estimated probability (95% CI)	'IBP+Peripheral' (P*=26.7%) Estimated probability (95% CI)	'At risk' (P*=54.5%) Estimated probability (95% CI)
Inflammation on MRI-SIJ (ASAS)	***0.83 (0.69; 0.92)***	0.22 (0.15; 0.30)	0.09 (0.06; 0.16)
Radiographic sacroiliitis (mNY)	***0.58 (0.45; 0.70)***	0.06 (0.02; 0.13)	0.02 (0.01; 0.08)
Elevated CRP (≥ 6 mg/dL)	***0.56 (0.44; 0.67)***	0.41 (0.32; 0.51)	0.14 (0.10; 0.20)
BME on MRI-Spine (≥ 5 lesions)	**0.20 (0.13; 0.30)**	0.00 (0.00; 1.00)	0.01 (0.00; 0.03)
≥ 1 syndesmophyte on X-spine	**0.11 (0.06; 0.20)**	0.05 (0.02; 0.11)	0.06 (0.04; 0.10)
Good response to NSAIDs (ever)	***0.97 (0.90; 0.99)***	*0.84 (0.76; 0.90)*	*0.82 (0.77; 0.86)*
Peripheral arthritis (ever)	0.09 (0.04; 0.20)	***0.73 (0.49; 0.88)***	0.00 (0.00; 1.00)
Dactylitis (ever)	0.03 (0.01; 0.15)	**0.46 (0.36; 0.55)**	0.01 (0.00; 0.31)
Heel enthesitis (ever)	0.26 (0.18; 0.37)	***0.60 (0.51; 0.69)***	0.45 (0.39; 0.51)
HLA-B27	***0.90 (0.79; 0.96)***	*0.52 (0.43; 0.61)*	*0.53 (0.47; 0.59)*
Family history of SpA	**0.48 (0.37; 0.58)**	0.44 (0.36; 0.53)	0.41 (0.36; 0.48)
Psoriasis (ever)	0.09 (0.04; 0.18)	**0.29 (0.22; 0.38)**	0.14 (0.10; 0.19)
Uveitis (ever)	0.08 (0.04; 0.18)	**0.12 (0.07; 0.20)**	0.08 (0.05; 0.12)
IBD (ever)	0.02 (0.00; 0.10)	0.05 (0.02; 0.11)	0.05 (0.03; 0.08)

* Probability of the latent class. Values are the conditional probability (95% confidence interval) for each Sp feature positivity within each latent class (range: 0-1). Values in **bold** highlight dominant features between later classes. Values in *italic* highlight dominant features (probability >50%) within each class. BME, bone marro edema; IBD, Inflammatory bowel disease.

SpA at risk'). Patients keep their clinical entity over 5 years and transition is very rare. The 'Axial' and 'IBP+Peripheral' entities are best captured by combining the ASAS axSpA and pSpA criteria.

P046 - HIGHER DISEASE ACTIVITY IS ASSOCIATED WITH MORE SPINAL RADIOGRAPHIC PROGRESSION IN PATIENTS WITH AXIAL SPONDYLOARTHRITIS

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Background: The association between disease activity and spinal radiographic progression in radiographic axial spondyloarthritis (r-axSpA) has been previously shown in a cohort of patients (pts) not being treated with TNF inhibitors (TNFi).
Objectives: To test the possible association between disease activity and spinal radiographic progression in r-axSpA in a real-life cohort, also including patients treated with TNFi.
Methods: Pts with axial spondyloarthritis (axSpA) fulfilling the modified New York criteria (mNY) were included in this prospective, observational cohort (ALBERTA FORCAST). Clinical and imaging data were collected at baseline and every 2 years up to 10 years of follow-up. Radiographs of the spine were independently scored by 2 central readers and one adjudicator (if disagreement), with known chronological order but blinded to clinical data, using the modified Stoke Ankylosing Spondylitis Spine Score (mSASSS). To be included, pts had to have ≥ one 2-year interval with data on mSASSS from ≥1 reader available as well as complete data on ASDAS and TNFi exposure at the start of the interval. The association between ASDAS at the start of the interval (t) and mSASSS 2 years later (t+1) was tested in two types of longitudinal GEE models: i. multilevel (2 readers) model with the individual reader scores as outcome (2-level models); ii. Using as outcome averaged scores between readers (1-level models). Both type of models were adjusted for mSASSS at t (autoregression) and for a set of potential confounders defined a priori on clinical grounds (Figure).
Results: In total, 314 pts (442 intervals) were included [74% males, mean symptom duration 17.8 (SD 11.7) years, 83% HLA-B27 positive and 7% previously treated with ≥1 TNFi]. At baseline the mean ASDAS was 2.7 (1.3) and the mean mSASSS 13.8 (18.9). During follow-up 213 (68%) pts received treatment with TNFi in ≥1 visit. Overall, the average 2-year progression was 1.33 (2.68) mSASSS-units per 2-year interval. In the 2-level multivariable model, 1 ASDAS-unit increase at t was associated with an increase of 0.25 mSASSS-units at t+1 [β (95% CI): 0.25 (95%CI 0.10; 0.41)] (Figure). Results were similar using the averaged mSASSS as the outcome [β (95% CI): 0.25 (0.08; 0.43)].
Conclusion: These data add to previous evidence by

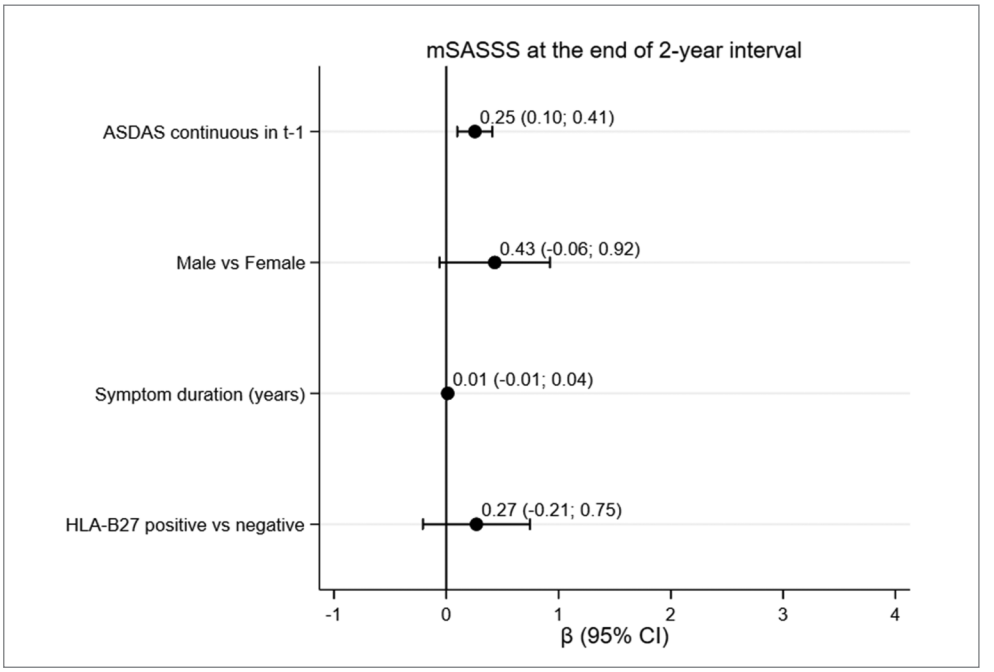

FIGURE 1. Longitudinal effect of ASDAS at the start of the interval on mSASSS 2 years later in a multilevel, multivariable linear GEE model with autoregression [N=313; model also adjusted for mSASSS at t-1 ('autoregressor), Number of TNFi before baseline (continuous) and TNFi at t-1 (yes vs no)]

showing that a higher ASDAS is associated with higher spinal radiographic progression in pts with r-axSpA independent of prior treatment with TNFi.

P048 - INCREASING IMPACT ON STRUCTURAL DAMAGE WITH INCREASING CUMULATIVE INFLAMMATION AT THE SI-JOINT QUADRANT LEVEL IN AXIAL SPONDYLOARTHRITIS – 5-YEAR DATA FROM THE DESIR COHORT

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Background: Axial inflammation is a key feature in axial SpA (axSpA). There is lack of data relative to the persistence of BME in the same anatomical quadrant (Q, 8 in total for both SIJ together), regardless of the overall presence of BME.

Objective: This study aims to investigate particular patterns of distribution of SIJ-BME across quadrants over time, their persistence over time, and their impact on clinical and structural outcomes.

Methods: Patients from the DESIR cohort (early axSpA according to the rheumatologist) with MRI-SIJ available at baseline, 2 and 5 years were included. Each image was scored by 3 trained central readers blinded to chronological order. BME was considered positive if detected in ≥1/6 slices in each of the 8 quadrants, according to each individual reader. Four different patterns of BME over time were defined (no BME, sporadic pattern, fluctuating BME and persistent BME) considering all 8 quadrants (Figure). The effect of BME patterns on 5-year structural (mNY, mSASSS, ≥5 erosions and/or fatty lesions in MRI-SIJ) and clinical outcomes (BASFI, BASMI and ASQoL) was evaluated using multilevel generalised estimating equations (GEE) models (taking the individual reader data into account) and linear regression (using the agreement of ≥ 2 out of 3), as appropriate. All models were adjusted for relevant confounders including treatment (Table).

Results: In total, 136 patients were included (age 34 (SD 9) years, 50% male, and 63% HLA-B27 positive). 'No BME' was seen in 63 patients (46%), the 'sporadic pattern' in 34 patients (25%), the 'fluctuating pattern' was seen in 21 patients (15%) and the 'persistent BME pattern' was seen in 18 patients (13%). Compared to the 'no BME' pattern (reference), the 'sporadic' [OR (95% CI): 2.1 (1.0;4.5)], 'fluctuating' [OR: 5.6 (2.2;14.4)] and 'persistent' [OR: 7.5 (2.8;19.6)] patterns were associated with higher likelihood to be mNY positive at 5-years, suggesting a gradient between cumulative inflammation and damage. Similar findings were observed for mNY as a continuous outcome variable and for ≥5 erosions and/or fatty lesions on spinal MRI as outcomes, but not for mSASSS (Table). There was no association between the BME patterns and the clinical outcomes.

Conclusion: Only 13% of the patients showed persistent inflammation in the same Q over a 5-year period and in 15% inflammation was fluctuating across dif-

TABLE I. ASSOCIATION BETWEEN SIJ-BME PATTERNS AND STRUCTURAL AND CLINICAL OUTCOMES

Outcome at 5 years	N	No BME	Sporadic BME	Fluctuating BME	Persistent BME
mNY (0-8)[a]	124	(reference)	0.4 (0.1;0.8)	**1.7 (1.1;2.3)**	**2.3 (1.6;3.0)**
mNY (yes/no)[b]	124	(reference)	2.1 (1.0;4.5)	**5.6 (2.2;14.4)**	**7.5 (2.8;19.6)**
mSASSS (0-72)[a]	117	(reference)	-0.2 (-0.9;0.6)	-0.3 (-1.3;0.3)	-0.5 (-1.3;0.3)
≥5 erosions or/and fatty lesions on MRI (yes/no) [b]	127	(reference)	**2.9 (1.4;5.9)**	**4.2 (1.6;10.8)**	**8.1 (4.1;16.6)**
BASFI (0-10)[c]	124	(reference)	-2.1(-8.8;4.7)	-5.9(-14.5;2.7)	0.2(-8.5;8.9)
BASMI (0-10)[c]	117	(reference)	-0.03(-0.44;0.38)	-0.43(-0.99;0.13)	0.03(-0.49;0.56)
ASQoL (0-18)[c]	123	(reference)	-1.3(-2.9;0.3)	**-2.2(-4.2;-0.2)**	-0.7(-2.7;1.3)

[a] Estimated by linear GEE, [b] Estimated by binomial GEE, [c] Estimated by linear regression
All analyses are adjusted for symptom duration, sex, smoking status, HLA-B27, medication (NSAID, csDMARD, bDMARD) and ASDAS.

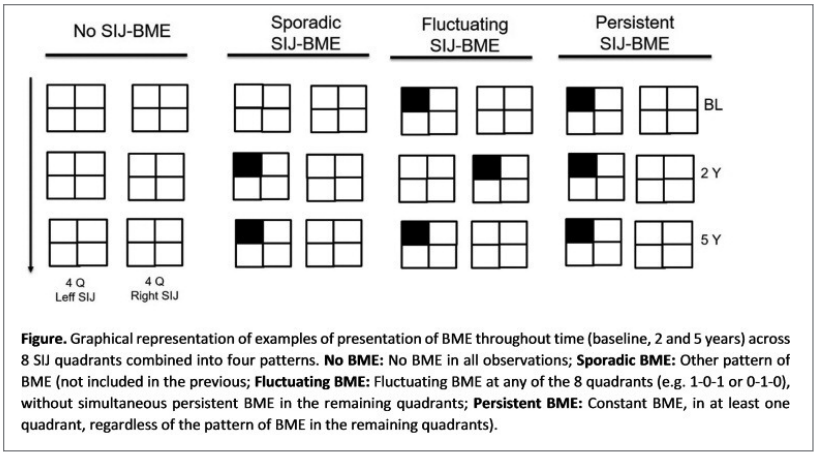

Figure. Graphical representation of examples of presentation of BME throughout time (baseline, 2 and 5 years) across 8 SIJ quadrants combined into four patterns. **No BME:** No BME in all observations; **Sporadic BME:** Other pattern of BME (not included in the previous; **Fluctuating BME:** Fluctuating BME at any of the 8 quadrants (e.g. 1-0-1 or 0-1-0), without simultaneous persistent BME in the remaining quadrants; **Persistent BME:** Constant BME, in at least one quadrant, regardless of the pattern of BME in the remaining quadrants).

ferent Qs. More structural damage was found in patients with increasing cumulative levels of local inflammation in the quadrant. Even when BME (temporarily) disappears there is an important effect on structural outcomes, and that effect t is independent of treatment.

P053 - EFFECT OF RF AND ACPA NEGATIVATION IN CLINICAL RESPONSE IN RA PATIENTS UNDER BIOLOGIC THERAPY

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Background: Both rheumatoid factor (RF) and antibodies against cyclic citrullinated peptide (ACPA) are regarded as serological markers of Rheumatoid Arthritis (RA), being well recognized as diagnostic and prognostic tools. However, their potential role in the disease's monitoring and clinical response is still under debate.
Objectives: To assess the effect of RF and ACPA negativation in clinical response to biologic therapy in RA patients.
Methods: Longitudinal retrospective study of RA patients treated with biologic therapy as first line option. Demographic and clinical data were collected at baseline and at 24 months follow-up, including: RF and ACPA status (negative or positive), ESR, CRP, DAS28 4v ESR, CDAI, SDAI, HAQ, EULAR and ACR response. RF was considered positive if ≥ 30 U/ml and ACPA if ≥ 7 U/ml. SPSS statistics 22.0 was used for statistical analysis.
Results: 169 patients were included with mean (±SD) age of 50.7 ± 10.6 years and median disease duration (min-max) of 10.2 (0.69-39.4) years. The majority were female (84%). At baseline 160 (94.7 %) were positive for RF and 166 (98.2%) were positive for ACPA. 77 (45.6%) turned negative for RF and/or ACPA at a median time of 20.3 months after biologic therapy begining. 63 out of 169 patients become negative for RF (37.3%) and 17 patients for ACPA (10.1%). 52 (30.6%) patients were treated with etanercept, 39 (22.9%) adalimumab, 27 (15.9%) rituximab, 19 (11.2%) tocilizumab; 16 infliximab (9.4%); 14 (8.2%) golimumab; 1 (0.6%) certolizumab and 1 (0.6%) anakinra. The mechanism of action of the drug didn't differ between patients who became seronegative for RF and/or ACPA and those who remained seropositive (70.2% under anti-TNFα agents vs 73.9% for the other biologics). Most of the patients in the first group began adalimumab (32.5%) and most of the patients in the latter began etanercept (34.8%). Demographic characteristics like age, sex, disease duration, and extraarticular manifestations were comparable in both groups. They weren't comparable in terms of smoking habits (p=0.014): just 3 (3.9%) current smokers in those who became negative for RF and/ or ACPA vs 17 (18.5%) among those who remained seropositive. Nevertheless, there weren't statistically significant differences in ∅DAS28 4v ESR, ∅ERS, ∅CRP, ∅CDAI, ∅SDAI, ∅HAQ, EULAR or ACR response at 24-months between patients with negativation of at least one antibody and those who remained seropositive.
Conclusion: In our sample, change of antibody status wasn't predictor of better response to biologic therapy.

Therefore the results did not support the association between the persistence of RF or ACPA and the lack of effectiveness of biologic therapy at 2 years of treatment, but further studies are needed.

P054 - THE ROLE OF ACPA AND RF IN THE MONITORING OF PATIENTS WITH RA: A CENTER PERSPECTIVE

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Background: Both rheumatoid factor (RF) and antibodies against cyclic citrullinated peptide (ACPA) are regarded as serological markers of Rheumatoid Arthritis (RA). Some studies have suggested that the status of these antibodies may be associated with a clinical response to anti-TNFα treatment. However, there are reports showing that the reduction in RF appears to be more marked and more significantly correlated with the therapeutic response.
Objectives: To assess the effect of anti-TNFα treatment on RF and ACPA status in patients with RA and its potential use as predictive markers of therapeutic response.
Methods: Longitudinal retrospective study of biologic naïve RA patients treated with anti-TNFα therapy at our center. Demographic and clinical data were collected including serum levels of RF and ACPAs at 0, 6 and 12 months after treatment begining, as well as DAS28 4v ESR, CDAI, SDAI, HAQ, ESR and CRP. SPSS statistics 22.0 was used for statistical analysis.
Results: 102 patients were included with mean (±SD) age of 49.79 ± 10.4 years and median disease duration (min-max) of 9.56 (1.23-33.16) years. The majority were female (88.3%). 45 were treated with etanercept, 27 golimumab, 24 adalimumab, 3 infliximab and 3 certolizumab pegol. At baseline, 69.6% were RF positive (>=30UI/ml) and 73.5% were ACPAs positive (>=10UI/ml). Median serum RF levels were 99.3 UI/ml (9.50-1240), being statistically different from 6 months [54.8 (1.10-2001)] and 12 months levels [54.9 (8.4-1620)]; p<0,05. Median serum ACPA levels were 163 UI/ml (40-5020), also statistically different in the following evaluations: 126 UI/ml (0.4-8160) at 6 months. Concerning this downregulation, decrease of RF at 6 months was bigger in patients that achieved moderate EULAR response (p=0.048), with median ØRF of -15.45 (range -655 to 1070 UI/ml) in opositttion to 0 (-92 to 265) in patients without EULAR response. Likewise there were statistically significant differences in disease activity at 6-months measured by DAS28 4v ESR (p=0.027). Patients in clinical remission had more decrease in RF levels (ØRF -14.9 (-116.9 to 596). In contrast, patients with high activity had less RF levels variation (ØRF 0 (-397 to 1070). On the other hand, ØRF at 6 months didn't correlate positively with ØESR, ØCPR, ØHAQ, ØCDAI, ØSDAI or with ACR response. Still, there were statistically significant differences in ØRF at 12 months according to ACR response (p=0,003). There wasn't downregulation of ACPA antibodies according to clinical response at 6 months and neither at 12 months follow-up.
Conclusion: In our sample, anti-TNFα treatment resulted in a decrease in the serum titres of RF (but no in ACPA titres) in patients showing clinical improvement, suggesting that these measurements may be useful in assessing treatment efficacy. This difference may be explained by differences in these antibodies, for instance, ACPA are associated with the shared epitope and with proven pathogenic effect to bone, in contrast to RF that are related with extra-articular manifestations. Therefore, ØRF appears to be more correlated with clinical response but the role of these antibodies in the monitoring of RA is still a matter of debate.

P055 - KNOWLEDGE AND PERCEPTIONS OF PORTUGUESE FAMILY PHYSICIANS TOWARDS ANKYLOSING SPONDYLITIS: RESULTS FROM THE ASSESSMENT OF RESULTS IN ANKYLOSING SPONDYLITIS (AREA) STUDY.

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Background. Ankylosing spondylitis (AS) patients have a significant delay between symptom onset and disease diagnosis, reaching on average 7 to 10 years in developed countries. Understanding the reasons behind this delay is essential to reduce the individual and socio-economic burden of the disease.
Objective. To assess knowledge and perceptions of Portuguese family physicians (FP) towards AS and determine whether these contribute to the diagnostic delay at the primary care level.
Methods. The Assessment of REsults in Ankylosing spondylitis (arEA) study was developed by the NOVA-Information Management School (Lisbon) in collaboration with the Portuguese Society of Rheumatology, the Portuguese Association of Family Physicians (APMGF), the National Association of Primary Care Units (USF-AN), the National Association of AS Patients and the Portuguese League Against Rheumatic Diseases. The arEA aimed at assessing reasons for delayed diagnosis of AS, as well as disease impact in patients' lives, global health and work. A comprehensive online survey was developed and sent to FP associated with APMGF and USF-AN, collecting data on demographics, global knowledge and diagnostic and treatment attitudes towards AS.
Results. 91 FP responded the survey, 51.6% female, more frequently from the 25-44 year-old age group, half of which with <5 years of clinical experience. Most FP (70%) did not consider AS to be a relevant disease in everyday clinical practice but recognized (90%) there was a delay in diagnosis (5 years on average). Nevertheless, knowledge over AS was adequate. On average, prevalence was considered to be 56 cases per 1000 persons (close to the actual prevalence of 47 cases per 1000 persons reported in the epidemiological study EpiReumaPt). When assessing a patient with suspicious AS, the most valued symptoms/signs were inflammatory back/buttock pain, extra-articular manifestations (uveitis, enthesitis, dactylitis, psoriasis) and sacroiliitis on imaging (4.1, 3.9 and 3.9 on a 1-6 scale, respectively); 92.5% of FP refer the patient to a hospital consultation, rheumatology in 88.5% of cases; 37.5% of FP initiate treatment, with NSAIDs in 81% of cases. A mean delay of 9 months between patient referral and first hospital consultation was also reported (>1 year in 22%). In 73.4% of cases, no specific referral protocol exists for AS or other rheumatic inflammatory conditions; 33.8% of FP felt that the development of such protocol would improve access, while 36.8% considered that a rheumatologist acting as consultant in primary care units would facilitate identification and referral of inflammatory conditions.
Conclusions. Portuguese FP reported significant delay in hospital consultation after referral of suspicious AS cases. They apparently had good knowledge of AS, though responses may have been influenced by a younger, more updated and willing-to-participate physician population (selection and response bias).

P056 - TREATMENT OPTIONS IN LUPUS MYOCARDITIS – A SYSTEMATIC REVIEW

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Background: In Systemic Lupus Erythematosus (SLE), cardiovascular involvement is an important cause of morbidity and mortality, and lupus myocarditis (LM), despite uncommon, is potentially fatal. At present, there is still a lack of evidence concerning the most appropriate therapeutic approach for this manifestation.
Objectives: To systematically identify and review available literature evaluating immunosuppressive (IS) treatment in LM.
Methods: A systematic literature search was performed in MEDLINE using the MeSH terms "myocarditis" and "systemic lupus erythematosus". All retrieved articles were screened by title and abstract and the eligible ones were kept for full-text review. Reference lists were additionally searched. Original research papers of LM cohorts encompassing treatment, in patients aged ≥18 years old, were considered for inclusion. Study quality assessment was performed with the National Institute of Health (NIH) Quality assessment tools. Given the low number of research articles retrieved, case reports were also compiled.
Results: The systematic search identified 341 unique search results, of which 231 were excluded after title and abstract screening. After full-text review of the remaining 110, 5 original research papers and 24 case report papers were included. The original research papers were all longitudinal retrospective studies, with samples ranging from 11 to 29 patients (table), only 2 with statistical analysis. Case report papers encom-

passed 32 LM episodes (table). The most frequent IS was intravenous cyclophosphamide (iv Cyc); the 2 studies that compared this agent versus others (methotrexate, mycophenolate mofetil, steroids, intravenous immunoglobulin (ivIgG)) (1,2) found no differences. Steroid therapy and ivIG were used as adjuvant but also as sole treatment. Despite a few cases of death due to LM (n=10) and LM relapse (n=4), the majority of reports had a benefic outcome and cohort studies showed improvements in left ventricle ejection fraction.

Conclusion: The included papers present a high risk of bias, precluding consistent conclusions. Iv Cyc was the most common agent used, but other retrieved options were mycophenolate mofetil, azathioprine, rituximab and methotrexate. Of note, bortezomib and mizoribine were both used in 1 case report each, with positive results. Steroids, ivIG and plasma exchange are adjuvant options to consider when treating LM.

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P057 - IS BOTULINUM TOXIN USEFUL IN SYSTEMIC SCLEROSIS RELATED VASCULOPATHY? A SYSTEMATIC REVIEW

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Background: In Systemic Sclerosis (SSc), peripheral vasculopathy typically manifests as Raynaud Phenomenon (RP) or Digital Ulceration (DU). These have a significant impact in patients' daily life and can ultimately progress to critical ischemia. Despite some pharmacological options already available, a satisfactory outcome for RP and DU in SSc remains elusive. Through the last 2 decades, botulinum toxin (BT) has been reported as beneficial in this scenario.

Objectives: To systematically identify and review available literature evaluating the efficacy of BT on RP/DU in patients with SSc.

Methods: A systematic literature search was performed in MEDLINE with the MeSH terms "systemic sclerosis" and "botulinum toxin". All retrieved articles were

TABLE I. CHARACTERISTICS AND MAIN RESULTS FROM LONGITUDINAL STUDIES AND CASE REPORTS.

LONGITUDINAL STUDIES

Study	Sample size, n	Age, years	Female gender, n	Follow-up	Steroids, n	IvIG, n	PE, n	IS treatment, n	Deaths, n	Deaths due to LM, n	Heart function, LVEF	LM relapse, n	Statistical analysis' results
Du Toit *et al*[a]	28	28.3±11.4 mean±SD	26	563, 4-1740 median,range days	27	$	1	Iv CYC, 21* MTX, 2	12	5	19 patients re-evaluated Median LVEF = 47% (37–50) Only 5 patients maintained values below 40%	2	Patients who died of LM were on ≥0.5 mg/kg PDN at diagnosis (p=0.026). Significant improvement in LVEF after treatment (p=0.023). No significant difference between IS treatments.
Law *et al*[b]	11	27±10 mean±SD	11	4, 2.5-10.1 median,range years	11	0	0	Iv CYC, 7 Oral CYC, 1	2	0	9 patients re-evaluated All patients improved 8 reached normal range	0	Not performed
Thomas *et al*[c]	29	30, 16-57 median,range	25	37, 4-115 median,range months	28	8	4	Iv CYC, 16 MMF, 2 PDN alone, 9 Iv IG alone, 1	3	2	20 patients re-evaluated at last visit. Median LVEF = 60% (50-65) 16 patients reached normal range All patients reached LVEF>40%	1	Final LVEF significantly improved compared to baseline (p<0.001). No difference between CYC vs no CYC considering median LVEF at 1 month (p = 0.54), and at last visit (p = 0.91).
Zawadowski *et al*[d]	24	47.6±20.4 mean±SD	19	9.2±6.1 mean±SD years	21	1	0	MMF, 6 Iv CYC, 3 AZA, 3 RTX, 1 IvIG alone, 1	3	2	16 patients re-evaluated Mean LVEF = 49.5±15.7% All patients improved 12 reached normal range	NR	Not performed
Zhang *et al*[e]	25	28.0±12.3 mean±SD	22	15, 1.25–67 median,range months	25	12	2	Iv CYC, 22 None, 3**	1	1	20 patients re-evaluated 16 patients improved 2 patients had mild deterioration	1	Significant improvement in LVFE at first follow-up (p<0.001)

CASE REPORTS

Drug	Number of patients	Adjuvant Steroid therapy	Adjuvant IvIg	Plasma exchange	Improved heart function	Worsen heart function	Death
AZA[1]	1	1	0	0	1	0	0
Mizoribine[2]	1	1	0	0	1	0	0
MMF[3,4,5]	4	4	3	0	4	0	0
Iv Cyc[7,11,12,13,14,15,16,17]	11	11	5	0	11	0	0
Iv Cyc + MMF[3,18]	2	2	0	0	2	0	1***
RTX[19,20,21]	4	4	0	0	3	1	0
Bortezomib + MMF[22]	1	1	0	1	1	0	0
Steroid therapy[3,6,7,8,9,10]	6	-	0	0	5	1	1
IvIg[23,24]	2	2	-	0	2	0	0

AZA – azathioprine; IS – immunossupressive; IvCyc – intravenous cyclophosphamide; IvIg – intravenous immunoglobulin; LM – lupus myositis; LVEF – left ventricule ejection fraction; MMF – Mycophenolate mofetil; NR – not reported; PE – plasma exchange; SD – standard deviation.
* followed by AZA as maintenance in 14 patients and MMF in 1. Four patients received additional immunosuppressive therapy, including AZA, ivIG and RTX) given serially for either resistant LM/relapse.** 1 deceased patient and 2 patients complicated with severe infection. $ - administered in some patients but *n* not reported.*** not attributable to myocarditis.

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screened by title and abstract and the eligible ones were kept for full-text review. Reference lists were additionally searched. Original studies evaluating the efficacy of BT in treating RP/DU in patients with SSc aged ≥18 years old, were considered for inclusion. Study quality assessment was performed with the National Institute of Health (NIH) qualitative assessment tools.
Results: The systematic search identified 26 unique search results, of which 19 were excluded after title and abstract screening. After full-text review of the remaining 7, 5 original research papers were included: 2 randomized controlled trials (RCT), 2 case series and 1 case control study (table), in a total of 133 patients. One RCT showed discouraging results (worse blood flow in treated arm) (1), but used a significant lower dose of BT (50U/hand). Despite this, and despite the heterogeneity of outcomes measurements, all reported at least 1 significant improvement of RP outcomes (1-5). Four studies also reported promising results concerning DU healing, with resolution of baseline DU at the end of follow-up in 66.7-100% of the sample (2,3,4) and a RCT showing superiority to placebo in doses of 1000 and 2000U/hand (5). An improvement was also reported in 2 studies, regarding hand function outcomes (3,4). The only adverse effect described was transient hand weakness, affecting only 0-16.7% of study patients. Besides the variety of outcomes, injection protocols differed in every study, including types of BT administered, with one using serotype B.
Conclusion: Despite the small number of studies, results point to BT as an effective and safe treatment option for peripheral vasculopathy manifestations of SSc, as it ameliorates RP crisis and contributes to DU healing. However, more randomized controlled trials (RCT) are needed, with unvarying outcomes and injection protocols.

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P059 - PREVALÊNCIA DE BAIXA DENSIDADE MINERAL ÓSSEA E FRATURAS DE FRAGILIDADE EM DOENTES COM VASCULITE ASSOCIADA A ANCA: UM ESTUDO TRANSVERSAL

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Introdução: Muitas doenças reumáticas, incluindo as vasculites, são caracterizadas pela ocorrência de osteoporose e fraturas de fragilidade. As citocinas inflamatórias, a terapêutica com glicocorticóides, a imobilização e a atividade física são considerados os principais fatores de risco. Doses cumulativas elevadas de ciclofosfamida também podem afetar a remodelação óssea por vários mecanismos, incluindo o seu papel no hipogonadismo.
Objetivos: Avaliar a densidade mineral óssea (DMO) e a presença de fraturas de fragilidade em doentes com vasculite associada a ANCA.
Métodos: Estudo transversal incluindo 24 doentes com vasculite associada a ANCA, seguidos em consulta de grupo de Reumatologia/Nefrologia, no nosso centro. As características clínicas e demográficas da amostra foram obtidas por consulta do processo clínico. A DMO foi determinada por densitometria óssea. A osteopenia e a osteoporose (OP) foram definidas segundo os critérios da OMS e a presença de fraturas de fragilidade foi avaliada por radiografia de perfil da coluna dorsolombar.
Resultados: 54,2% do sexo feminino, com uma mediana de idades (min-max) de 69,5 (40-88) anos e índice de massa corporal (IMC) médio (± desvio padrão) de 28,5 ± 5,46 kg/m2. 17 (70,8%) apresentam poliangeíte microscópica; 4 (16,7%) granulomatose com poliangeíte e 3 (12,5%) granulomatose eosinofílica com poliangeíte; 83,3% têm positividade para ANCA-MPO. A duração mediana (min-max) da doença é de 4 (2-14) anos. Todos têm vasculite renal e 41,7% têm envolvimento de outro órgão. A dose cumulativa mediana (min-max) de prednisolona e ciclofosfamida é de 9,24 g (5,2-30,5) e 7,38 g (4,5-27), respectivamente. A DMO mediana da coluna lombar é de 1,176 [-0,7-(1,4)] g/cm2 e a DMO média no colo do fémur é de 0,865 ± 0,13 g/cm2. O score-T médio do colo do fémur é de -1,3 ± 0,9. 41,7% têm hipovitaminose D (8,3% têm mesmo uma deficiência severa). 15 doentes (62,5%) têm osteopenia e 2 (8,3%) têm OP. 20,8% têm fraturas vertebrais radiográficas, sendo que estes apresentam uma DMO inferior da coluna lombar (0,74 ±

0,1 vs 0,9 ± 0,1), embora sem significado estatístico. O grupo com osteopenia/OP é mais velho (mediana 71 Vs 66 anos), ainda que sem significância estatística. Por outro lado, 11 dos 12 doentes que têm envolvimento multiorgânico têm osteopenia/OP (p = 0,016). 25% têm uma probabilidade de fratura major aos 10 anos (calculada pelo FRAX) > a 11% e estes têm mais fraturas do que os restantes (p=0,038). Não existem diferenças estatísticas em relação ao sexo, IMC, duração da doença, dose cumulativa de prednisolona e ciclofosfamida ou níveis séricos de vitamina D.

Conclusão: Embora a osteopenia seja comum nesta população, a prevalência de fraturas a fragilidade é baixa, o que poderá estar relacionado com o uso de uma dose mínima de corticóides e medidas preventivas. Ainda assim, parece haver um risco maior nos doentes com envolvimento multiorgânico.

P062 - CLINICAL CHARACTERISTICS AND TREATMENT IN A COHORT OF SJOGREN'S SYNDROME PATIENTS

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Background: Primary Sjögren's syndrome (pSS) is a chronic autoimmune inflammatory disease that most commonly affects women in their 50s and 60s. It is characterized by lymphocytic infiltration of the salivary, lacrimal and other exocrine glands, leading to characteristic sicca complaints, but up to 70-75% of patients (pts) can have extraglandular manifestations, which treatment may involve the use of steroids and other immunosuppressive drugs.

Objectives: To characterize immunology profile, type of extraglandular involvement and treatment approach in a cohort of pSS pts.

Methods: Retrospective analysis of pSS pts followed in our Rheumatology department until December 2018. Demographic data, disease duration, immunologic and histopathologic results, type of organ involvement and specific drugs used were analyzed.

Immunological/histopathological results and extraglandular manifestations were compared using Qui-square test.

Results: In total, 137 pSS pts fulfilled the European-American consensus criteria 2002, 130 (94.9%) females, with mean age at pSS onset of 56.1 (±12.2) years; median disease duration of 6 [IQR 3-10] years and median follow-up 6 [IQR 3-10.25] years. From these 137, 61 (44.5%) also fulfilled ACR/EULAR criteria 2016. Antinuclear antibodies (ANA) were positive in 113 (82.5%) pts, with 95/134 (70.9%) pts being positive to anti-SSA and 60/128 (46.9%) to anti-SSB antibodies. Specific immunoassays were performed in 82 pts of the overall cohort, allowing identification of anti-Ro52 antibody in 48 of them. Rheumatoid factor was positive in 48/91 (52.7%; 46 missing data).

In the 99 pts that performed minor salivary glands biopsy, 66 (66.7%) had ≥ 1 foci (Chisholm-Mason grade 3).

Data on extraglandular involvement is shown in Table I.

Presence of hypergammaglobulinemia was associated with anti-SSA positivity (p=0.001) and anti-SSB (p<0.001).

Lung involvement was documented in 17 pts, with 9 presenting interstitial lung disease (ILD), 6 isolated bronchiectasis and 2 follicular bronchiolitis.

Neurologic involvement presented as peripheral polyneuropathy (PNP) in 4 pts (3 pure sensory and 1 sensorimotor) and as ganglionopathy with moderate ataxia in 1pt

Renal involvement was present in 2 pts, 1 with per-

TABLE I. ANALYSIS OF PATIENTS WITH DIFFERENT EXTRAGLANDULAR DISEASE SUBTYPES

	Age at pSS diagnosis (mean±SD)	Disease duration (median IQR)	ANA	Anti-SSA	Positive biopsy
Constitutional (n=11)	59.4 ± 12.3	8 [2-14]	10 (90-9%)	7 (70%)	6 (60%)
Haematological / Cytopenia (n=50)	52.8 ± 11.7	7 [3-11]	47 (92.2%)	41 (82%)	21 (61.8%)
Biological / Hypergammaglobulinemia (n=58)	54.4 ± 13	5 [2-9.25]	55 (94.8%)	50 (86.2%)	25 (62.5%)
Articular (n=54)	54.5 ± 12.8	4 [2-7]	42 (77.8%)	38 (71.7%)	24 (70.6%)
Pulmonary (n=17)	60.9±8.6	8 [2.5-12]	15 (88.2%)	10 (62.5%)	7 (58.3%)
Cutaneous (n=10)	50.3 ± 19.8	5.5 [3.25-9]	10 (100%)	9 (90%)	5 (100%)
Neurologic (n=5)	70.2 ± 9.8	4 [2-5]	4 (80%)	2 (40%)	3 (100%)
Renal (n=2)	44.5	3.5	2 (100%)	2 (100%)	0 (0%)

Legend: pSS - primary Sjögren's syndrome; ANA – antinuclear antibodies

sistent proteinuria of 0.7g/day without renal failure and the other with interstitial nephritis with tubular acidosis.

Hydroxychloroquine was given to 103 (75.2%) pts, with 4 of them having to stop it due to ophthalmologic toxicity and 3 due to gastrointestinal side effects.

Other immunosuppressive drugs used included cyclophosphamide (1 pt with ILD and 2 with PNP), mycophenolate mofetil (4 pts with ILD) and azathioprine (2 pts with ILD, 1 pt with PNP and 1 pt with persistent thrombocytopenia and neutropenia).

Ten pts with arthritis received methotrexate and 2 pts leflunomide.

Rituximab was used in 2 pts, 1 with ILD and other with interstitial nephritis with tubular acidosis and important constitutional involvement. In our cohort there were 3 deaths, 1 in relation to pSS-associated lung disease and the other 2 due to sepsis (respiratory and abdominal), both treated with immunosuppressive drugs.

Conclusions: pSS preferably affects women in their 50s, with nearly half of the pts having at least 1 extraglandular manifestation. Biological (42.3%), articular (39.4%) and haematological (36.5%) manifestations were the most common.

HCQ was used in 75% of our cohort, but immunosuppressive drugs were added in pts with specific extraglandular manifestations, particularly articular, pulmonary and neurologic.

P067 - CARDIOVASCULAR RISK FACTORS AND FRAMINGHAM RISK SCORE IN PRIMARY SJOGREN´S SYNDROME PATIENTS: A COMPARATIVE STUDY WITH MATCHED CONTROLS.

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Background: The association between cardiovascular (CV) risk and chronic systemic inflammatory diseases has been an issue of debate. There is compelling evidence of increased CV morbidity in conditions such rheumatoid arthritis (RA) and systemic lupus erythematous (SLE) (1). Primary Sjögren's syndrome (pSS) is a chronic immune-mediated disease characterized by glandular and systemic manifestations, sharing clinical and immunological similarities with RA and SLE. However, in pSS patients the weight of cardiovascular disease attributed to traditional CV risk factors remains unclear.

Objectives: To determine the prevalence of traditional CV risk factors and long-term CV events based on the risk prediction tool of the Framingham risk score (FRS) in pSS patients.

Methods: The study included patients diagnosed with pSS, fulfilling both the 2016 ACR/EULAR and 2002 AECG criteria for the disease, followed-up at our Rheumatology department and 49 age and sex-matched controls. Inclusion criteria were age 30 to 74 and no history of CV events in order to calculate the FRS. In total, 46 out of 54 patients were eligible for the study. Data on the prevalence of traditional CV risk factors (diabetes, arterial hypertension and smoking), systolic blood pressure (SBP) values, total and high-density lipoprotein (HDL) cholesterol levels were collected and compared between groups. The 10-year risk for CV events according to FRS was calculated and means of patients and controls were compared. Parametric and nonparametric tests were used and the level of significance was defined as $p<0.05$.

Results: The mean age of pSS patients and healthy individuals was 58.0±11.6 and 54.1±13.6 years, respectively. The prevalence of arterial hypertension was higher in pSS patients than controls (52.2% versus 24.5%, p=0.005). The prevalence of diabetes and smoking did not differ significantly between the two groups (p=0.674 and p=0.949, respectively). The SBP values, total and HDL cholesterol levels were also similar between pSS patients and healthy subjects (p=0.063, p=0.413 and p=0.217, respectively).

Mean 10-years risk for CV events assessed by FRS was 11.8±8.3 for pSS patients and 7.8±8.4 for matched controls, with statistically significant difference (p=0.013).

Conclusion: In our study, pSS patients had a higher prevalence of arterial hypertension, which is in agreement with the M. Juarez et al (1) study. Although there were no significant differences in the other traditional CV risk factors, the results showed an increased 10-year risk for major CV events based on FRS assessment in pSS patients in comparison to age and sex-matched controls.

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P070 - QUESTIONÁRIO EM TORNO DA PRÁTICA DE ECOGRAFIA MUSCULOESQUELÉTICA (EME) NA REUMATOLOGIA PORTUGUESA

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Objetivos: Entender o papel e importância que a EME tem na prática clínica dos médicos da especialidade de Reumatologia, assim como, perceber se ocorreram modificações de perspetiva, nos últimos 4 anos, em relação a esta técnica, caracterizar o percurso formativo dos seus executantes e apurar as dificuldades da sua implementação.
Metodologia: Foi elaborado um inquérito com 54 questões referentes a diferentes aspetos da prática da EME. O inquérito foi enviado, em formato eletrónico, a todos os associados da Sociedade Portuguesa de Reumatologia (SPR). A informação foi recolhida através do portal tecnológico Ad-Hoc Research AskIt®, tendo contado com a participação de um Field Research Manager para efeitos de controlo de qualidade, acompanhamento do projeto e validação do mesmo. Os resultados foram comparados com os registados num inquérito aplicado em 2015.
Resultados: Na tabela I estão representados os dados referentes à caracterização dos respondedores e dos aspetos alusivos à aprendizagem e prática de EME, em 2015 e 2019. 90.5% dos médicos possuem no seu local de prática clínica um equipamento próprio, sendo que maioritariamente os equipamentos disponíveis são da General Electrics (71.7%), apresentam sondas lineares multifrequência (4-18 MHz) e todos possuem Doppler. Na sua grande maioria, os praticantes de EME, consideram importante ou muito importante a existência de uma ferramenta de apoio à sua prática, que inclua formação continuada e registo uniformizado de atividade, 42.5% consideram importante ou muito importante a existência de uma plataforma de registo Nacional da prática de EME e 50% pensam utilizá-

TABLE I. ANALYSIS OF PATIENTS WITH DIFFERENT EXTRAGLANDULAR DISEASE SUBTYPES

INQUERITO	2015	2019
Número de inquéritos enviados	202	225
Número de respondedores	63	81
Número de questões	28	54
Caracterização dos respondedores		
Género feminino (%)	54	63
Idade média ±DP	41.5±11.5	40±11.12
Especialistas (%)	75	74.1
Média de anos de prática clínica	12.17±10.09	12.97±9.31
Formação em EME (%)	70	71
Início formação durante o Internato (%)	62	92.9
Praticantes de EME após formação específica (%)	48	74
Como aprendeu EME (%)		
Ensino direto	63	54.8
Cursos/Formação	63	31
Ambos	-	14.3
Locais onde recebeu os cursos/formação EME		
Em Portugal, no serviço onde trabalha/ trabalhou	43	66.7
Em Portugal, no serviço de radiologia	8	4.4
Em Portugal, noutro local	-	35.7
No estrangeiro, no serviço onde trabalha/ trabalhou	37	33.3
No estrangeiro, no serviço de radiologia	3	0
No estrangeiro, noutro local	-	45.2
Média de anos de prática da EME	4.4±5.1	7.14±5.58
Número médio de horas semanais dedicadas à EME	5.57±4.23	6.33±4.44
Número médio de exames realizados	441±458.8 / ano	53.28±56.76/mês
Produção de relatórios (%)	51	86.1
Registo de atividade (%)	57	89
Prática de EME no Hospital Público (%)	44	88
Prática de EME no Hospital / Consultório / Clínica Privada (%)	24	45
Serviço Hospital com instalações próprias para a EME (%)	89	81

la de futuro. 77.2% dos inquiridos consideram importante ou muito importante o exercício de EME no espectro de atividade clínica de um reumatologia e 72.6% atribuí o mesmo grau de importância a uma futura certificação de "Competência em EME". Mais frequentemente a EME é utilizada para fins diagnósticos e é preferencialmente solicitada na avaliação dos reumatismos abarticulares, seguindo-se da suspeita de artrite (artrite indiferenciada). Quanto ao seu posicionamento na avaliação do doente com artrite reumatoide, 71.9% consideram-na um método superior em comparação com as medidas clínicas tipicamente utilizadas na avaliação do doente, assumindo maior expressão em doentes em risco / suspeita de artrite reumatoide, avaliação de doentes em falência terapêutica e na avaliação de doentes com dissociação clínico-laboratorial. Nas espondilartrites 54% dos inquiridos consideram-na um método superior em comparação com as medidas clínicas tipicamente utilizadas na avaliação da entesite, assumindo maior importância em doentes em risco/suspeita de espondilartrite e avaliação de doentes em falência terapêutica. Quando questionada qual a maior limitação para a utilização mais frequente da EME o acesso limitado a ecógrafos foi a razão mais apontada.

Discussão/Conclusões: Os associados da SPR consideram a EME uma técnica relevante na prática clínica de um reumatologista, tendo-se verificado, nos últimos 4 anos, um aumento do número dos seus praticantes, possivelmente relacionado com o Programa de Formação Específica em Reumatologia e o investimento que tem sido desenvolvido nesta área por parte da SPR.

P072 - LONG-TERM ASSOCIATION BETWEEN DISEASE ACTIVITY MEASURED BY ASDAS AND PHYSICAL FUNCTION IN A LARGE EARLY AXIAL SPONDYLOARTHRITIS COHORT

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Background: The Ankylosing Spondylitis Disease Activity Score (ASDAS) has been progressively replacing the Bath Ankylosing Spondylitis Disease Activity Score (BASDAI) as the main disease activity measure to assess patients with axial spondyloarthritis (axSpA), both in the research context as well as in clinical practice. However, further evidence is needed to show its meaningfulness regarding the longitudinal relationship with physical function.

Objectives: To study the long-term association between disease activity and physical function in axSpA.

Methods: DESIR is a prospective observational cohort of patients with recent onset (<3 years) inflammatory back pain, suggestive of axSpA. We analysed data collected during the first five years of follow-up and selected patients with a definite diagnosis of axSpA according to the treating rheumatologist. Physical function was assessed using the Ankylosing Spondylitis Health Assessment Questionnaire (HAQ-AS). Disease activity was measured using the ASDAS C-reactive protein (ASDAS-CRP) and BASDAI. In a first step, associations between HAQ-AS (dependent variable) and disease activity (defined by ASDAS or BASDAI), clinical and demographic variables were tested in univariable models. Multivariable models were then built adjusting for potential confounding factors found to be significant in the univariable analysis.

In a second step, additional multivariable analysis was conducted using the Chi-square Automatic Interaction Detector (CHAID) method, with HAQ-AS as dependent variable. The following independent variables were tested: ASDAS/BASDAI, enthesitis score, arthritis, employment status, gender, symptom duration, body mass index (BMI), HLA-B27 status, treatment with non-steroidal anti-inflammatory drugs (NSAID), conventional disease modifying anti-rheumatic drugs (cDMARD) and TNF-blockers. The final model fixed as criteria: 70 parent nodes and 20 child nodes to create new generations in the decision tree.

Results: Data from 644 patients and 4944 visits were analysed. There was a significant independent association between HAQ-AS and gender, employment status, peripheral arthritis, ASDAS-CRP/BASDAI, enthesitis, NSAID and anti-TNF treatment (Table I). The decision tree revealed ASDAS as the first variable with discriminative power on HAQ-AS, according to the following cut points: 1.3, 2.2 and 2.4. In addition, for ASDAS values above 3.5 the model yield a higher number of explanatory variables setting different patients' profiles regarding their functional status, namely: gender, anti-TNF and NSAID treatment. Notably, the ASDAS cut-offs that separated different patient profiles largely mimicked the cut-offs previously defined for

TABLE I. ANALYSIS OF PATIENTS WITH DIFFERENT EXTRAGLANDULAR DISEASE SUBTYPES

Characteristics	Univariable analysis, OR (95% CI)	Multivariable analysis taking ASDAS-CRP into account, adjOR (95% CI)	Multivariable analysis taking BASDAI into account, adjOR (95% CI)**
Age, years	1.00 (1-00-1.05)	NA	NA
Male gender	0.73 (0.68-.78)	0.82 (0.78-.86)	0.84 (0.80-.88)
BMI, Kg/m2	1.01 (1.00-1.01)	*	*
HLA-B27 positive	0.84 (0.78-.90)	*	*
Symptoms duration, years	0.98 (0.98-.99)	*	*
Currently employed	0.95 (0.91-.99)	0.95 (0.91-.98)	0.95(0.91-.98)
Current smoker	1.01 (0.98-1.05)	NA	NA
Current peripheral arthritis	1.21 (1.13-1.30)	1.10 (1.04-1.16)	1.09 (1.03-1.16)
ASDAS-CRP	1.26 (1.2421.29)	1.25 (1.23-1.27)	NA
BASDAI	1.01 (1.01-1.01)	NA	1.01 (1.01-1.01)
Enthesitis score (0 to 39)	1.02 (1.02-1.03)	1.01 (1.01-1.02)	1.01 (1.01-1.01)
Modified NY criteria	0.95 (0.89-1.01)	NA	NA
MRI sacroiliitis	1.01 (0.96-1.07)	NA	NA
mSASSS score	0.99 (0.98-1.01)	NA	NA
NSAIDs (last 6 months)	1.13 (1.09-1.16)	1.03 (1.01-1.06)	1.03 (1.01-1.06)
cDMARDs (last 6 months)	1.09 (1.03-1.14)	*	*
TNF-blocker (last 6 months)	0.92 (0.88-.96)	1.07 (1.03-1.11)	1.04 (1.01-1.08)

*Not selected for this model; NA – not applicable; ** Model adjusted with the cofactors considered significant in the proposed multivariable model for ASDAS (previous column)

ASDAS disease activity states (inactive, low, high and very high disease activity). According to this hierarchical model, gender, anti-TNF treatment and enthesitis score were the next variables explaining HAQ-AS variation, followed by employment status and NSAID treatment.

Conclusion: We have shown that disease activity contributes longitudinally to physical function and that it is hierarchically superior to any other variables or disease domains. Previously defined ASDAS-CRP disease activity categories identified different patient profiles on the hierarchical analysis.

P074 - PREGNANCY IN SLE PATIENTS: RESULTS FROM A PORTUGUESE COHORT

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Background: Several inflammatory rheumatic diseases frequently affect women of reproductive age, increasing the likelihood of a high risk pregnancy. Systemic lupus erythematosus (SLE) is the paradigmatic systemic rheumatic disease associated with poorer outcomes to mother and fetus.

Objective: To investigate maternal and fetal outcomes of pregnancies occurring after SLE diagnosis.

Methods: Retrospective study of women aged between 18-45 years with SLE diagnosis followed at a Tertiary Rheumatology Department. Demographic and clinical data were collected from Rheumatic Diseases Portuguese Registry (reuma.pt) and from medical records. We included, when available, obstetric history (number of pregnancies, abortion, fetal death, previous eclampsia/preeclampsia, previous thrombotic events), maternal outcomes (defined as presence of gestational diabetes, hypertension, eclampsia/pre-eclampsia), fetal outcomes (defined as intrauterine growth restriction (IUGR), fetal death), type of delivery (fullterm and preterm delivery, vaginal birth or caesarean), lupus history (disease duration, treatment, presence of nephritis, antiphospholipid antibodies). Only the most recent pregnancy from each included patient was considered for the analysis.

Results: We included 40 women with SLE with at least one pregnancy after diagnosis from a total of 157 women aged between 18-45 years-old. The mean age of the women at time of pregnancy was 30.7±4.6years and it was the first pregnancy in 60% of the cases (n=24). Previous to the pregnancy, 4.7% (n=2) had thrombotic antiphospholipid syndrome, 4.7% (n=2) had obstetric antiphospholipid syndrome, 27.5% (n=11) had spontaneous abortion and 47.5% (n=19) had lupus nephritis. Relatively to the immunologic profile: 30% (n=12) had positive anti-SSA, 10% (n=4) had positive anti-SSB and 25% (n=10) had positive antiphospholipid antibodies. At pregnancy, the mean disease duration was

8.4±5.6 years and the majority was under treatment with hydroxychloroquine (72.5%, n= 29); 62.5% (n= 25) treated with aspirin and 20% (n= 8) with heparin. During pregnancy, 4 women (10%) were diagnosed with diabetes, 3 (7.5%) with hypertension and 1 (2.5%) with preeclampsia. Early abortion was recorded in 3/36 women, no cases of fetal deaths and 3 cases of IUGR. Successfully delivery occurred in 91.7% (33/36), being caesarean in 32.3% (n=10/31) and vaginal birth in 67.7% (n=21/31); 22.6% (n=7/31) were preterm. Low birth weight occurred in 16.1% (n=5/31).

Conclusion: IUGR, abortion, preeclampsia and preterm delivery were the most common complications of SLE in pregnancy in our cohort. Overall, successful pregnancy in women with SLE will depend on pre-conceptional and prenatal planning and follow-up in specialized and multidisciplinary units.

P075 - EFFICACY AND SAFETY OUTCOMES IN PATIENTS WITH AXIAL SPONDYOARTHRITIS TREATED WITH CERTOLIZUMAB PEGOL: RESULTS FROM THE 48–WEEK RUN–IN PART OF A 96-WEEK STUDY (NCT02505542)

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Background/Purpose: C-OPTIMISE is the first trial to evaluate whether certolizumab pegol (CZP) can be reduced/discontinued in patients with radiographic(r)-axSpA/ankylosing spondylitis (AS) and non-radiographic(nr)-axSpA achieving sustained remission after 48 weeks' (wks') treatment. Here, we report interim efficacy and safety data for both subpopulations from the ongoing trial.

TABLE I. BASELINE CHARACTERISTICS AND CLINICAL OUTCOMES

	Part A (CZP 200 mg Q2W): Open Label Set					
	axSpA (n=736) [a]		r-axSpA/AS (n=407) [b]		nr-axSpA (n=329) [b]	
Baseline characteristics						
Age (years), mean (SD)	32.9 (7.0)		33.7 (6.8)		32.1 (7.1)	
Male, n (%)	513 (69.7)		318 (78.1)		195 (59.3)	
Symptom duration (years), mean (SD) [c]	2.2 (1.7)		2.5 (1.8)		1.8 (1.6)	
HLA-B27 positive, n (%)	607 (82.5)		359 (88.2)		248 (75.4)	
Sacroiliitis on imaging, n (%) [d]	691 (93.9)		401 (98.5)		290 (88.1)	
Prior anti-TNF treatment, n (%)	32 (4.3)		20 (4.9)		12 (3.6)	
Clinical outcomes	axSpA (n=736)		r-axSpA/AS (n=407)		nr-axSpA (n=329)	
%	BL	Wk48 NRI	BL	Wk48 NRI	BL	Wk48 NRI
ASAS20	–	79.6	–	79.9	–	79.3
ASAS40	–	72.0	–	71.3	–	72.9
ASAS PR	–	57.3	–	55.8	–	59.3
BASDAI 50	–	71.7	–	71.3	–	72.3
Mean [e]	BL	Wk48 LOCF [e]	BL	Wk48 LOCF [e]	BL	Wk48 LOCF [e]
ASDAS	3.7	1.6	3.8	1.6	3.6	1.5
ID, %	–	52.7†	–	52.6	–	52.9‡
CII, % [f]	–	76.5	–	78.6	–	73.9
MI, % [f]	–	56.3	–	58.7	–	53.2
BASDAI	6.7	2.1	6.7	2.1	6.7	2.2
BASFI	5.3	1.7	5.4	1.7	5.2	1.6
BASMI	3.1	2.3	3.5	2.6	2.7	1.9
Nocturnal back pain	6.9	1.8	7.0	1.8	6.8	1.8
Fatigue	7.1	2.6	7.1	2.5	7.1	2.6
CRP (mg/L), median [g]	7.8	2.0	10.7	2.0	4.5	2.0

[a] Patients with prior exposure to >1 anti-TNF were excluded. [b] A central reading of patients' sacroiliac joint x-rays was used to confirm their stratification into nr-axSpA and r-axSpA/AS subpopulations. [c] Time since diagnosis of disease. [d] MRI or X-ray. [e] Unless stated otherwise. [f] NRI. [g] Values below the limit of quantification were set to half of the limit of quantification. †n=734. ‡n=327. AS: ankylosing spondylitis; ASAS20/40: ≥20% or ≥40% improvement in Assessment of SpondyloArthritis international Society response criteria; ASAS PR: ASAS Partial Remission; ASDAS: Ankylosing Spondylitis Disease Activity Score; axSpA: axial spondyloarthritis; BASDAI: Bath Ankylosing Spondylitis Disease Activity Index; BASDAI 50: ≥50% improvement in BASDAI; BASFI: Bath Ankylosing Spondylitis Functional Index; BASMI: Bath Ankylosing Spondylitis Metrology Index; BL: baseline; CII: ASDAS Clinically Important Improvement (RFB ≥1.1); CRP: C-reactive protein; CZP: certolizumab pegol; ID: ASDAS Inactive Disease (ASDAS <1.3); LOCF: last observation carried forward; MI: ASDAS Major Improvement (RFB ≥2.0); MRI: magnetic resonance imaging; nr-axSpA: non-radiographic axSpA; NRI: non-responder imputation; Q2W: every 2 weeks; r-axSpA: radiographic axSpA; RFB: reduction from baseline; Wk: week.

Methods: Up to wk48, C-OPTIMISE (NCT02505542) was open-label (Part A), followed by 48-wk parallel-group, double-blind, placebo-controlled treatment (full dose and half dose) to wk96 (Part B). Patients with adult-onset axSpA of <5 years' duration, fulfilling ASAS classification criteria, were recruited. Part A: patients received CZP (400mg at wks0/2/4, then 200mg Q2W); patients achieving sustained remission (ASDAS<1.3 at wk32 and <2.1 at wk36 [or vice versa], and <1.3 at wk48) were eligible for Part B (secondary outcome). Primary outcome (not reported): percentage of patients in Part B not experiencing a flare. Missing values were imputed using non-responder imputation (NRI) and last observation carried forward (LOCF).

Results: Part A: Of 736 patients (Table), 43.9% achieved sustained remission (r-axSpA/AS: 42.8%; nr-axSpA: 45.3%; NRI). At baseline, 98.5% patients had high/very high disease activity (ASDAS≥2.1); at Wk48,

52.7% (r-axSpA/AS: 52.6%; nr-axSpA: 52.9%) had inactive disease (ASDAS<1.3; LOCF; Table). The treatment-emergent adverse event (TEAE) rate/100 patient-years' exposure was 224.2; 4.5% patients discontinued CZP due to TEAEs. No new safety signal was identified.
Conclusion: The run-in phase of C-OPTIMISE shows that similar and substantial proportions of patients with r-axSpA/AS and nr-axSpA achieved sustained remission during 48 wks' CZP treatment. No new safety signal was identified.
The study was funded by UCB Pharma, medical writing by Hinal Tanna, Costello Medical, UK. We thank the patients who contributed.
Disclosures

UCB Pharma funded this study and abstract. UCB Pharma reviewed only for scientific and legal accuracy.

P076 - THE PREVALENCE AND TREATMENT PATTERNS OF WOMEN OF CHILDBEARING AGE WITH RHEUMATIC DISEASES

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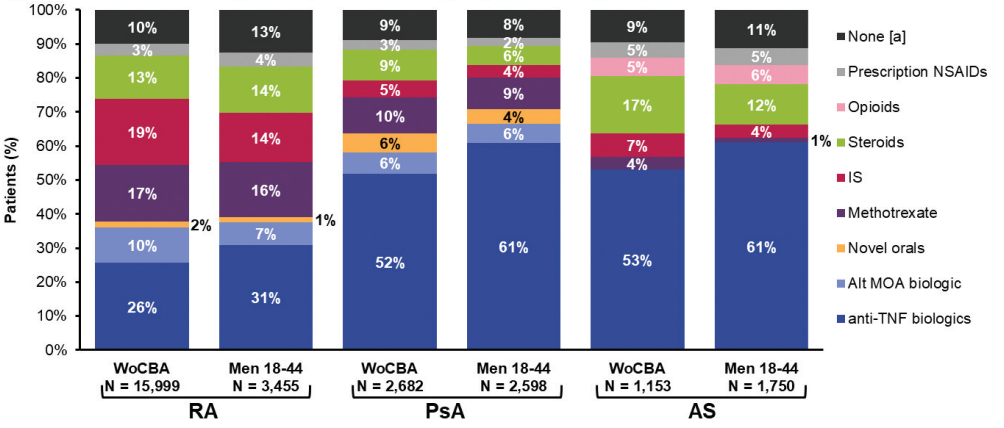
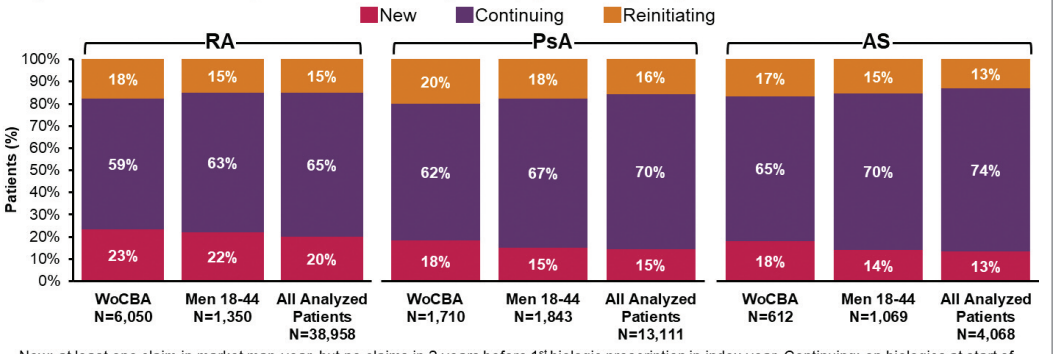
Background/Purpose: Emerging data on exposure of infants to therapeutics through placental transfer and breastmilk could impact the management of women of childbearing age (WoCBA) with rheumatic diseases

Figure A: Overall drug use (hierarchical) by patient group



[a] Indicates pts that met the inclusion criteria for diagnoses but did not receive a prescription of any of the listed classes during the index year. If a pt used multiple drug classes, the pt was assigned based on following hierarchy: 1) anti-TNF biologic/Alt MOA biologic/novel oral (latest prescription) 2) Methotrexate 3) IS 4) Steroids 5) Prescription NSAIDs. Alt MOA: alternative mechanism of action; AS: ankylosing spondylitis; IS: immunosuppressant; NSAID: nonsteroidal anti-inflammatory drug; PsA: psoriatic arthritis; RA: rheumatoid arthritis; TNF: tumor necrosis factor; WoCBA: women of childbearing age.

Figure B: Treatment patterns of biologics by patient group



New: at least one claim in market map year, but no claims in 2 years before 1st biologic prescription in index year. Continuing: on biologics at start of index year (has at least 1 biologics prescription in the 60 days before 1st biologics in the index year) and have at least 1 claim in market map year. Reinitiating: not on biologics at start of index year, but have at least 1 claim in index year, and at least 1 biologics prescription in the 2 years before 1st biologic in index year (≥60 day gap between).
AS: ankylosing spondylitis; PsA: psoriatic arthritis; RA: rheumatoid arthritis; TNF: tumor necrosis factor; WoCBA: women of childbearing age.

(RD; including rheumatoid arthritis [RA], psoriatic arthritis [PsA] and ankylosing spondylitis [AS]). This descriptive study assessed differences in treatment patterns of patients (pts) with RD between WoCBA and comparator groups.

Methods: IMS PharMetrics claims were used to identify pts continuously enrolled between Jan 2014–Dec 2015 with: ≥2 RD diagnosis codes and ≥1 RD diagnosis or ≥1 RD medication claim between Jan–Dec 2015 (measurement period). Age/gender at the start of the measurement period were used to allocate pts to the following cohorts: WoCBA (aged 18–44 years), Women (45–65), Men (18–44), and Men (45–65). Outcomes assessed in the measurement period included % biologics utilization and treatment changes (discontinuation [≥60-day gap with no additional biologic claims]; switch [initiation of new biologic within 60 days]; re-initiation of the same or new biologic [after gap ≥60 days]).

Results: Of the WoCBA pts analyzed, 15,999 had RA, 2,682 PsA and 1,153 AS. Biologic utilization among WoCBA pts with RD was lower compared with men in the same age group. Use of methotrexate was similar between genders for RA and PsA pts, but higher for WoCBA than for men with AS (Figure A). Across RD pt cohorts on biologic therapy, WoCBA had the highest proportion of new and reinitiating pts, and the lowest proportion of continuing pts (Figure B). Similarly, across RD indications, the WoCBA pt group on biologic therapy had one of the highest numbers of Switch, Reinitiate (new), and Discontinue events, compared to all other groups.

Conclusion: Despite the importance of disease control prior to, during and after pregnancy, trends show lower rates of biologic use in WoCBA pts. Further exploration is needed to better understand how treatment patterns among WoCBA pts are impacting their disease outcome and how to best optimize care.

The study was funded by UCB Pharma, conducted by Charles River Associates, medical writing by Julia Bárdos, Costello Medical, UK. We thank the patients, their caregivers and the investigators who contributed.

P078 - COMO SÃO DETECTADOS OS NOSSOS AUTOANTICORPOS?

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Introdução: Os autoanticorpos são o hallmark da autoimunidade, sendo que os anticorpos antinucleares (ANAs) tem vindo a desempenhar um papel central durante as últimas décadas[1]. A detecção dos anticorpos da família ANA é fundamental no diagnóstico e prognóstico de várias doenças reumáticas[1]. A imunofluorescência indirecta (IIF) é a técnica gold standard para a detecção dos ANAs[1]. O conhecimento dos métodos utilizados (as suas sensibilidade/especificidade e limitações) é indispensável para uma correcta interpretação dos resultados.

Objectivo: Conhecer quais os principais métodos laboratoriais utilizados na detecção de autoanticorpos nos hospitais portugueses.

Metodologia: 16 serviços de Patologia Clínica de hospitais portugueses com serviço de Reumatologia foram convidados a preencher um questionário sobre os principais métodos laboratoriais utilizados para detecção de autoanticorpos. Foram colocadas questões acerca dos anticorpos: ANAs, anti-dsDNA, anti-Sm, Factor Reumatóide (FR), anti-CCP, anti-SSA e anti-SSB, anticentrómero (ACA), anti-topoisomerase I (Scl 70), anticoagulante lúpico (AL), anticardiolipina (aCL), anti-β-2 glicoproteína, anti-citoplasma de neutrófilos (ANCA). O questionário permitia que mais de um método fosse indicado por cada questão.

Resultados: Obteve-se resposta de 11 hospitais. Mais de 90% dos laboratórios utiliza a IIF para detecção de ANAs, sendo o Hep2 o substrato mais utilizado (90,9%). Aproximadamente 64% dos laboratórios utiliza kits para detecção de ANAs. O teste de imunofluorescência indireta com Crithidia luciliae (CLIFT) é o teste mais comumente utilizado na detecção de anticorpos anti-dsDNA (45,5%) enquanto que o imunoensaio fluoroenzimático (FEIA) é o mais utilizado na detecção de anticorpos anti-Sm (63,6%). A imunoturbidimetria é a técnica mais usada na detecção de FR (27,3%), embora 18,2% dos laboratórios refiram a utilização do RA teste. A detecção de anticorpos anti-CCP é realizada em 54,5% dos laboratórios através do método de quimioluminescência. A maioria dos laboratórios utiliza o FEIA para detecção de anticorpos anti-SSA/SSB (54,5%). Mais de 70% dos laboratórios utiliza a IIF na deteção dos anticorpos ACA, sendo este um dos métodos mais utilizados também na detecção de anticorpos Scl 70 (45,5%). Na quantificação do AL, o método do tempo do veneno de cobra Russell diluído (dRVVT) foi o mais referido (72,7%), com 63,6% dos laboratórios a utilizar pelo menos, dois métodos para a sua detecção. Um laboratório referiu utilizar o tem-

po de coagulação de Kaolin (KCT). O FEIA foi o teste mais representativo na detecção de anticorpos aCL (45,5%), enquanto que a quimioluminescência e a técnica Enzyme-Linked Immunosorbent Assay (ELISA) são as mais utilizadas na detecção de anticorpos anti-β-2 glicoproteína (54,6%). Os ANCA são detectados maioritariamente por ELISA (27,3%) e quimioluminescência (27,3%).

Conclusão: A heterogeneidade de métodos laboratoriais utilizados na detecção de autoanticorpos poderá dificultar a interpretação e valorização dos resultados obtidos. Apesar da referência a outras técnicas, a IIF com Hep2 continua a ser o principal método utilizado na detecção de ANAs. Alguns laboratórios mantêm a utilização de testes de baixa especificidade ou actualmente não recomendados, como o RA teste para detecção de Factor Reumatóide ou o teste KCT para a detecção de AL.

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P079 - TRATAMENTO DA ARTRITE PSORIÁTICA COM FÁRMACOS BIOTECNOLÓGICOS: O QUE MUDOU EM 16 ANOS DE TERAPÊUTICA

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Introdução: Com o surgimento de novos fármacos biotecnológicos e de novas estratégias terapêuticas, é expectável a existência de diferentes características entre os doentes que mais recentemente iniciam/alteram o seu tratamento biotecnológico e aqueles que iniciaram tratamento num período mais remoto. Até à data, apenas um estudo se debruçou sobre este tema.

Objectivo: Caracterização clínica e sociodemográfica dos doentes com Artrite Psoriática (AP) sob tratamento biotecnológico entre 2002 e 2018 e comparação das variáveis referidas entre o grupo de doentes com início de terapêutica biológica entre 2002 e 2010 (G1) e o grupo de doentes com início de tratamento biotecnológico entre 2011 e 2018 (G2).

Metodologia: Consulta de dados clínicos e sociodemográficos processuais adquiridos no período compreendido entre 2002 e 2018; análise descritiva e comparativa das variáveis em questão.

Resultados: 68 doentes com o diagnóstico de AP iniciaram terapêutica biotecnológica entre 2002 e 2018. Destes, 41 doentes iniciaram tratamento com biotecnológico entre 2002 e 2010 (G1) e 27 doentes entre 2011 e 2018 (G2). Não se verificaram diferenças quanto à idade (p=0,308), sexo (p=0,578), escolaridade (p=0,804) ou situação laboral (p=0,503) entre os dois grupos. Verificou-se um número significativamente mais elevado de reforma por invalidez atribuída à AP nos doentes em G1 (p=0,044). A idade ao diagnóstico foi inferior nos doentes em G1 (38,74 ± 11,08 vs 44,64 ± 12,06; p=0,042), não se tendo verificado diferenças quanto ao subtipo de diagnóstico (p=0,069), positividade para Factor Reumatóide (FR) (p=0,260) ou HLA-B27 (p=0,394), ou presença de psoríase cutânea/ungueal (p=0,473; p=0,137). Embora a mediana de duração da doença à data do primeiro biotecnológico seja superior em G1 (M=97; DIQ=142 meses vs M=79; DIQ=142 meses), esta diferença não se revelou estatisticamente significativa (p=0,591). Verificaram-se diferenças significativas relativamente à terapêutica prévia com DMARDs clássicos nos dois grupos (p=0,001): a monoterapia com Metotrexato (MTX) e a associação de MTX e Sulfassalazina (SLZ) foram mais comuns em G1, enquanto que a SLZ em monoterapia, a associação de SLZ e Leflunomida (LEF) e a associação tripla de MTX, SLZ, e LEF, foram mais comuns em G2. O número de doentes sem tratamento com DMARD previamente ao início de biológico foi superior em G1. Verificou-se uma mediana de articulações dolorosas (AD) e/ou articulações tumefactas (AT) significativamente superior em G1 (MAD G1 = 6; DIQ=10 vs MAD G2 = 2,5; DIQ=5; (p=0,002); MAT G1 = 4,5; DIQ=7 vs MAT G2 = 2; DIQ=5; (p=0,006)). Não se verificaram diferenças estatisticamente significativas quanto ao valor dos parâmetros inflamatórios (PCR: p=0,979; VS: p=0,797) e índices de actividade (DAS28: p=0,094; BASDAI: p=0,974) à data de início de primeiro biotecnológico. Relativamente à função, o valor do HAQ foi mais elevado nos doentes de G1 (p=0,037), não se verificando diferenças relativamente aos valores de BASFI (p=0,135). A resposta ASDAS foi superior em G2 (p=0,032), não se tendo obtido diferenças nos valores de resposta ACR (p=0,646) ou PsARC (p=0,519). Os doentes em G2 apresentaram um número significativamente inferior de suspensões de terapêutica biotec-

nológica (OR=0,165; 95% IC=0,048-0,571; p=0,002).
Conclusão: Os doentes com AP que mais recentemente iniciaram biotecnológico apresentam menor invalidez atribuída à doença, maior probabilidade de tratamento prévio com um DMARD clássico, uma menor contagem articular, e um menor grau de disfunção à data de início de tratamento biotecnológico.

P080 - SÍNDROME DO TÚNEL CÁRPICO: REVISÃO DE 5 ANOS DE TRATAMENTO

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Introdução: A síndrome de túnel cárpico (STC) é uma neuropatia periférica comum, caracterizada por dor e/ou alterações sensitivas no território do nervo mediano. O seu diagnóstico é clínico, complementado pela realização de electromiografia (EMG). A STC pode ser tratada de forma conservadora ou cirúrgica, estando a cirurgia indicada nos casos refractários à terapêutica convencional.
Objectivos: Caracterização dos doentes com STC observados em consulta de Reumatologia e/ou submetidos a tratamento cirúrgico no Serviço de Ortopedia; análise de associações entre a gravidade e forma de apresentação do STC e as variáveis consideradas; avaliação do outcome dos doentes submetidos a tratamento conservador (i.e., infiltração local com glucocorticoide (GC)).
Metodologia: Revisão de dados relativos aos doentes com STC observados em consulta de Reumatologia Patologia Loco-Regional entre 2013-2017 e uma amostra emparelhada por sexo e idade de doentes submetidos a intervenção cirúrgica no serviço de Ortopedia durante o mesmo período.
Resultados: Foram incluídos 251 doentes, maioritariamente do sexo feminino (n=205; 81,7%), com uma média de idades de 53,06 ± 13,75 anos. O Ensino Básico foi o nível de escolaridade mais representativo (n=40; 53,3%), sendo que 30,8% dos doentes com situação laboral descrita não exerciam actividade remunerada e 20,5% desempenhavam funções como operários fabris. O atingimento bilateral foi o mais representativo (37,0%), seguido do envolvimento da mão dominante (32,3%). A maior parte dos doentes apresentou uma combinação variável de sintomas como a dor, parestesias e alterações da força (61,4%), sendo que as parestesias foram sintoma único em 38,6% dos doentes. Objectivamente, 65,8% dos doentes apresentaram positividade para o teste de Phalen, 62,7% para o teste de Tinel e apenas 17,2% apresentaram sinais de atrofia tenar. O atingimento exclusivamente sensitivo foi o mais comum (57,9%), com 35,4% dos doentes a apresentarem envolvimento grave. Apenas 33,9% da amostra realizou tratamento com infiltração local com GC. A cirurgia foi realizada em 50% da mostra total. Verificou-se que doentes mais velhos (p=0,001), com valores mais elevados de IMC (p=0,045) e com múltiplos sintomas, apresentaram doença tendencialmente mais severa (OR=2,32; 95% CI 1,264-4,240). Dos 85 doentes submetidos a tratamento local, 35 foram posteriormente submetidos a cirurgia. Nesses casos, o tempo médio entre o tratamento local e cirúrgico foi de 8,58±5,66 meses. Verificou-se que doentes não submetidos a infiltração apresentaram um risco 2 vezes superior de intervenção cirúrgica (OR=1,95; 95% IC = 1,51-2,52; p<0,001). Contudo, os doentes observados em consulta de Reumatologia que realizaram tratamento local apresentaram doença tendencialmente mais ligeira (OR=0,20; 95% IC=0,11-0,36). A realização de cirurgia associou-se ao envolvimento da mão dominante (OR=3,33; 95%CI = 1,68-6,62; p>0,001), à presença de múltiplos sintomas (OR=5,61; 95%CI=3,12-10,08, p<0,001), ao envolvimento sensitivo e motor concomitante (OR=2,92; 95% CI= 1,54-5,54; p=0,001) e à gravidade da doença segundo critérios electromiográficos (OR=4,9; 95% IC 2,20-10,91; p<0,001).
Conclusão: A STC é mais comum no sexo feminino. A sua gravidade e tipo de envolvimento associam-se a vários factores, nomeadamente o IMC. A realização de cirurgia é mais comum aquando do envolvimento da mão dominante, do compromisso sensitivo e motor concomitante. O tratamento conservador com infiltração de GC pode ser eficaz no controlo sintomático do STC e reduzir o número de doentes operados nos casos menos graves.

P084 - ANTINUCLEAR ANTIBODIES IN PRIMARY CARE SETTING: IS IT WORTH IT?

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Background: Antinuclear antibodies (ANA) are the most frequently used screening tests for connective tissue diseases. However, their diagnostic value depends on the pre-test probability of such conditions.
Aim: To evaluate the usefulness, clinical correlates and associated direct costs of ANA testing in the primary care setting in an Early Arthritis Clinic (EAC) referral cohort.
Methods: A retrospective study of consecutive patients referred to the EAC between 2011 and 2018 was conducted. Referral is based on the fulfillment of specific criteria: presence of arthritis or clinically suspected arthralgia beginning in the previous 12 months, plus suggestive laboratorial abnormalities (rheumatoid factor, C-reactive protein or erythrocyte sedimentation rate). Many general practitioners also performed ANA testing (ANA-GP) and all patients underwent ANA testing, per protocol, in EAC (ANA-EAC). All patients having these 2 separated ANA results were included in the analysis. ANA-EAC titters and pattern were assessed by indirect immunofluorescence (Hep2, positive=titter≥1:160). Direct associated costs of ANA-GP were calculated, based on the mean charge of 3 different local labs. Positive (PVV) and negative predictive values (NPV) of ANA-GP for the diagnosis of inflammatory rheumatic disease, ANA-related rheumatic disease (ARD) and for the presence of ANA-EAC were determined.
Results: 207 patients were referred to the EAC Clinic during this period (64.3% female, aged 53.9 ± 18.2 years-old). Fifty eight percent of these patients (n=120) had their ANA previously determined in primary care setting. Of these, only 9.2% of cases (n=11) were positive, this being one of the main reasons for referral. Only 73% percent of positive (n=8) and 24% of negative ANA-GP were confirmed as such in our lab. Of the 8 patients testing positive in both settings, 2 had no rheumatic disease, 2 had an ARD and 4 had another type of inflammatory rheumatic disease. ANA-GP PPV and NPV were: i) 18.2% and 92.7% (LR 2.44) for ARD; ii) 63.6% and 27.5% (LR 0.74) for inflammatory rheumatic disease and 72.7% and 23.9% (LR 0.124) for a positive ANA-EAC result. The referral criteria with the highest PPV for the diagnosis of inflammatory rheumatic disease were: positive rheumatoid factor (76.2%), high erythrocyte sedimentation rate (71.6%) and clinical signs of arthritis (70.8%). The direct cost associated with duplicate ANA testing was estimated in 2.160€.
Conclusion: ANA testing in the primary care setting had a poor predictive value in this cohort, which can be explained by its application in patients with low pretest probabilities for ARD. Although the direct costs may not seem impressive, we speculate the real cost to be much higher since ANA test rarely is requested solo but, instead, along with a lot of other autoantibodies in a "trawl fishing" attempt to diagnosis. ANA evaluations are not recommended for the study of putative arthritis cases in primary care and local campaigns should be promoted in order to improve referral quality avoiding unnecessary, costly and lengthy lab tests as ANA.

P088 - THE LEVEL OF AGREEMENT BETWEEN CLINICAL EXAMINATION AND ULTRASONOGRAPHY IN EARLY ARTHRITIS

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Introduction: Over the past decades, Early Arthritis Clinics (EAC) have been created to identify early arthritis and institute appropriate treatment as soon as possible. In Rheumatoid Arthritis (RA) many studies show that ultrasonography (US) is superior to clinical exam for the detection of synovitis and has good correlation with clinical findings and markers of inflammation and can be used to improve the certainty of a diagnosis of RA. [1] However, few studies address the agreement between the US with the clinical examination in patients with early arthritis.
Objective: To evaluate the agreement between clinical examination and US findings of metacarpophalangeal and proximal interphalangeal joints of patients with early arthritis
Methods: Patients from the EAC of our department with suspect arthralgia were included. Patients were submitted to clinical evaluation by a rheumatologist to identify tender and swollen joints. They were then submitted to an US examination of metacarpophalangeal (MCP) and proximal interphalangeal (PIP) joints, by an experienced sonographer oblivious of the previous examination. Each joint was scored for the presence of synovial hypertrophy (SH) and Power Doppler (PD) signal. Based on OMERACT guidance, we defined synovitis as: ≥ grade 1 grey scale synovitis

TABLE I. LEVEL OF AGREEMENT BETWEEN CLINICAL EXAM AND US SYNOVITIS

	joint swelling and US synovitis§ (kappa)		
	Synovial hypertrophy	Power Doppler signal	Synovitis §
Metacarpophalangeal joints	0,32 *	0,33 *	0,32 *
Proximal interphalangeal joints	0,11 *	0,08 *	0,11 *
All joints	0,21 *	0,19 *	0,21 *
	joint tenderness and US synovitis§ (kappa)		
Metacarpophalangeal joints	0,17 *	0,22 *	0,20 *
Proximal interphalangeal joints	0,17 *	0,12 *	0,17 *
All joints	0,16 *	0, 16 *	0, 16 *
	joint tender and swelling and US synovitis§ (kappa)		
Metacarpophalangeal joints	0,29 *	0,28 *	0,29 *
Proximal interphalangeal joints	0,11 *	0,07 ‡	0,11 *
All joints	0, 19 *	0, 17 *	0, 19 *

§ Defined as ≥ grade 1 grey scale synovitis and ≤ grade 1 power-Doppler.
* p<0,001; ‡p=0,006

(hypoechoic SH regardless of the presence of effusion) and ≤ grade 1 power-Doppler. The diagnostic value of clinical evaluation was assessed through sensitivity, specificity, Negative predictive value (NPV) and Positive predictive value (PPV), assuming the US synovitis as gold standard. Clinical arthritis was defined by joint swelling. Cohen's kappa coefficient was used to analyse concordance between joint swelling appreciated by clinical exam and HS, PD and the presence of US synovitis. Kappa values < 0 were considered poor, 0-0.20 slight, 0.21-0.40 fair, 0.41-0.60 moderate, 0.61-0.80 good and 0.81-1.00 excellent. [2] Statistical significance was defined as p<0.05. Statistical analysis was performed using IBM SPSS Statistics, version 21.0.
Results: 77 consecutive patients were included (53.2% female) with a mean age of 53.8±19.1 years. We evaluated 770 MCP and 770 PIP joints. The sensitivity and specificity of clinical examination in relation to US synovitis was respectively 71% and 60% for MCP and 54.5% and 43.9% for PIP. The NPV and PPV for MCP were 87.8% and 33.3% respectively, and for PIP were 85.3% and 13.9%. The level of agreement between joint swelling and HS, PD and the presence of synovitis is show on Table I.
Conclusion: The clinical evaluation of MCP showed a better performance than clinical evaluation of IFP. The high NPV of clinical examination makes its suitable to be used to rule out MCP and PIP involvement in patients with early arthritis. The performance of the two assessment strategies on the same day may increase agreement and diagnostic certainty.

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P090 - SALIVARY GLAND ULTRASOUND FINDINGS ARE ASSOCIATED WITH CLINICAL AND SEROLOGIC FEATURES IN PRIMARY SJOGREN'S SYNDROME PATIENTS.

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Background: Primary Sjögren's syndrome (pSS) is a multisystem immune-mediated disease characterized by hypofunction of salivary and lacrimal glands and possible multi-organ systemic manifestations. Over the past years, three sets of diagnostic criteria have been

TABLE I. COMPARISON OF DEMOGRAPHICS, CLINICAL AND SEROLOGIC FEATURES OF PSS ACCORDING TO SGUS

	Pathological SGUS (n=19)	Normal SGUS (n=35)	P value
Mean age, years	54.3±12.6	59.2±13.5	0.497
Mean disease duration, years	6.6±6.1	7.7±5.2	0.976
ESSDAI (IQR)	2.2 (0-5)	0.9 (0-1)	**0.044**
Mean Sedimentation rate, mm	36.3±22.1	22.7±15.8	0.160
Antinuclear antibody, n (%)	19 (100)	32 (91.4)	0.544
Anti-SSA, n (%)	18 (94.7)	27 (77.1)	0.137
Anti-SSB, n (%)	14 (73.7)	9 (25.7)	**0.001**
Rheumatoid factor, n (%)	14 (73.7)	14 (40.0)	**0.018**
Hypergammaglobulinemia, n (%)	12 (63.2)	14 (40)	0.104
Mean β2-microglobulin, mg/L	2.9±0.9	2.2±0.7	0.378
Mean Complement 3, mg/dL	115.1±28.9	120.7±24.5	0.938
Mean Complement 4, mg/dL	21.6±6.0	21.9±8.1	0.165
Hydroxychloroquine treatment, n (%)	15 (78.9)	21 (60.0)	0.229

proposed, but none included salivary gland ultrasound (SGUS) (1). However, SGUS has been recently applied for diagnosis and there are some reports regarding the correlation of SGUS findings with immunological and serological features in pSS patients (2, 3).

Objective: To investigate the association of SGUS findings with clinical and analytical features of pSS patients.

Methods: A total of 54 patients diagnosed with pSS, fulfilling both the 2016 ACR/EULAR and 2002 AECG criteria for the disease, followed-up at our Rheumatology department, underwent SGUS evaluation of salivary gland involvement. Ultrasound (US) examination was performed with a 15 MHz linear probe (General Electric LOGIQ S8). The parenchymal homogeneity of bilateral parotid and submandibular glands was graded using a score of 0 (normal) to 4 (gross inhomogeneity). Patients were classified into two groups according to the highest US score obtained. The grades 1 and 2 were considered to be normal and grades 3 and 4 to represent pathological SGUS findings. Demographics (age, sex and disease duration), European League Against Rheumatism Sjögren's Syndrome Disease Activity Index (ESSDAI) and laboratorial data (erythrocyte sedimentation rate, autoantibodies, rheumatoid factor, hypergammaglobulinemia, β2-microglobulin and complement levels) were collected and compared between the two SGUS groups. The association between SGUS and these data was explored by multivariable analysis. Statistical significance was defined as $p < 0.05$.

Results: The mean age of patients was 57.5±13.3 years and median disease duration was 5.0 [IQR (2.75--11.25)] years. The majority of the study population were women (96%) and 35% (19/54) had pathological SGUS findings.

Differences between the group with pathological SGUS versus the group with normal SGUS are depicted in Table I.

Multivariate logistic regression revealed that anti--SSB (odds ratio [OR] = 6.6, 95% confidence interval [CI] 1.7 to 25.8, p = 0.006) was independently associated with the presence of pathological features in SGUS.

Conclusion: In our study, pathological US findings were associated with higher disease activity and positivity for rheumatoid factor and anti-SSB. Additionally, anti-SSB antibody was strongly and independently associated with pathological US findings in the salivary gland of pSS patients.

Further and larger studies are necessary to support these findings and include SGUS as part of the diagnostic criteria for Sjögren's syndrome.

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P096 - PATIENTS BELIEFS ABOUT MEDICINES PRESCRIBED FOR THEIR RHEUMATOID ARTHRITIS OR SPONDYLOARTHRITIS

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Introduction: Adherence to therapies is determined by multiple factors, some of which are patient's related and include economic resources, knowledge, attitudes, beliefs, perceptions and expectations about medication. Our objectives were to assess patients' beliefs about prescribed medication for their rheumatic disease (rheumatoid arthritis (RA) or spondyloarthritis (SpA), including psoriatic arthritis) and to determine

TABLE I. DESCRIPTIVE STATISTICS OF THE CONTINUOUS VARIABLES OF THE RA AND SPA PATIENTS

	RA patients Median (IQR)	SpA patients Median (IQR)
Current age - years	60,0 (51,0-66,0)	47,0 (39,5-57,0)
Disease duration – years	14,5 (12,0-18,3)	13,0 (8,0-19,0)
Time on treatment with the current biologic therapy – months	31,0 (20,0-62,0)	37,0 (12,0-83,0)
PGA	32,0 (6,0-55,0)	29,0 (14,5-51,5)
Pain VAS	41,0 (21.0-60.0)	-
PhGA	19,5 (6,5-33,8)	12,5 (5,0-23,5)
Nocturnal back pain VAS	-	17,0 (4,5-34,0)
Back pain VAS	-	18,0 (5.5-43,0)
VS – mm/H	15,0 (7,0-30,5)	7,0 (2,0-14,0)
CRP – mg/dL	0,2 (0,1-0,6)	0,3 (0,1-1,0)
DAS28_4V	3,2 (2,4-4,4)	-
BASDAI	-	2,8 (1,1-4,6)
ASDAS	-	1,8 (1,1-2,4)
BASMI	-	2,7 (2,1-4,0)
HAQ	0,8 (0,4-1,2)	-
BASFI	-	1,8 (0,7-3,7)
BMQ-SN	17,0 (15,0-18,0)	16,0 (15,0-18,0)
BMQ-SC	18,0 (15,0-22,0)	18,0 (13,5-22,0)

the existence of any association between these beliefs and clinical and socio-demographic variables.

Methods: Observational cross-sectional study which included RA patients according to 1987 ACR and/or 2010 ACR/EULAR criteria and SpA patients according to 2009 ASAS classification criteria (CC) for axial SpA or to 2011 ASAS CC for peripheral SpA, on subcutaneous biological therapy, followed at our Center, able to complete questionnaires autonomously and who agreed to participate. Socio-demographic and clinical data, anxiety and depression through the Hospital Anxiety and Depression Scale (HADS) and fatigue using the Functional Assessment of Chronic Illness Therapy - Fatigue questionnaire (FACIT-F) were collected. To assess beliefs about medication, the cross-culturally adapted Portuguese version of the Beliefs about Medicines Questionnaire (BMQ)-Specific was used, asking patients to apply it considering only the prescribed medicines for AR or SpA. The BMQ-Specific comprises two subscales: a five-item Necessity scale (Specific-Necessity, SN) and a six-item Concerns scale (Specific-Concerns, SC). Each item is scored on a five-point Likert scale (from 1 = strongly disagree to 5 = strongly agree). Statistics: descriptive, Mann-Whitney and Kruskal-Wallis tests and Spearman correlation, $p < 0.05$.

Results: We obtained data from 84 patients, 45 SpA (53.6%) and 39 (46.4%) RA patients. Table I presents the descriptive statistics of the continuous variables. In RA group, 92.3% were female, 84.6% under anti-TNF, 66.7% under their 1st biologic and we found an association between BMQ-SC score and HADS-anxiety ($p=0.013$) and positive correlations between BMQ-SC score and Patient Global Assessment (PGA) ($p=0.031$), pain VAS ($p=0.004$), Physician's Global Assessment (PhGA) ($p=0.004$), DAS28 ($p=0.007$), and HAQ ($p<0.001$). In SpA group, 62.2% were female, 86.7% under anti-TNF, 77.8% under their 1st biologic and BMQ-SN score was positively correlated with nocturnal back pain VAS ($p=0.047$), PhGA ($p=0.045$) and BASFI ($p=0.003$).

Conclusion: In RA patients, those with higher disability and a clinically more active disease presented higher levels of concern regarding the medication. In SpA, patients with a more aggressive disease, with higher levels of nocturnal pain and worse function have a stronger conviction of the necessity and efficacy of the medication.

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P097 - ASSESSMENT OF PATIENTS KNOWLEDGE ABOUT BIOLOGIC THERAPY AS A SELF-COMPLETION QUESTIONNAIRE. IS IT A GOOD WAY TO DO IT?

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Introduction: Lack of knowledge from a patient in his

TABLE I. SCORES OBTAINED IN THE DIFFERENT DOMAINS OF THE QUESTIONNAIRE

Domains	Mean±SD	Median (IQR)	Min.	Max.
Process of use [-8; 8]	5.6±2.0	6.0 (5.0-6.0)	-2	8
Therapeutic objective [-4;4]	3.5±1.1	4.0 (4.0-4.0)	0	4
Safety [-8;8]	1.3±1.5	1.0 (0-2.0)	-3	4
Conservation of the medicine [-2;2]	1.9±0.6	2.0 (2.0-.,0)	-1	2

therapy may lead to a misuse process, increasing the probability of failure to achieve the therapeutic goal. Our objective was to evaluate if the assessment of the RA and SpA patients' knowledge in their biologic therapy could be done as a self-completion questionnaire.
Methods: Observational cross-sectional study which included patients with RA according to 1987 ACR and/or 2010 ACR/EULAR criteria or SpA according to 2009 ASAS classification criteria (CC) for axial SpA or to 2011 ASAS CC for peripheral SpA (including patients with psoriatic arthritis), on subcutaneous biological therapy who agreed to participate. Patients' knowledge about their biologic therapy was assessed using the "Conhecimento do doente sobre os seus medicamentos" (CPM-PT-PT), meaning "Patient's knowledge about his medicines", intercultural adaptation for the Portuguese version of the original Spanish questionnaire, CPM-ES-ES. This questionnaire was created to be used as an interview, but we decided to give it to patients and ask them to complete it autonomously, reading the questions and writing their answers, considering only their biologic therapy. It consists of 11 questions, each with a score based on patient's answer: incorrect = -1, the patient doesn't know = 0, incomplete = 1 and correct = 2. The final score is calculated using the mathematical formula described by the authors, ranging from 0 (doesn't know the medicine) to 2 points (optimal knowledge). Statistics: descriptive, Mann-Whitney and Kruskal-Wallis tests and Spearman correlation, $p < 0.05$.
Results: We included 84 patients, 45 of which with SpA (53.6%) and 39 (46.4%) with RA. In the RA group, 92.3% were female, 84.6% were under anti-TNFα, 66.7% were under their 1st biologic, the median age was 60.0 (51.0-66.0) years and the median time in treatment with current biologic was 31.0 (20.0-62.0) months. In the SpA group, 62.2% were female, 86.7% were under anti-TNF, 77.8% were under their 1st biologic, median age was 47.0 (39.5-57.0) years and median time in treatment with current biologic was 37.0 (12.0-83.0) months. Fifteen incomplete questionnaires were excluded. Sixty patients (87.0% of the 69 valid questionnaires) didn't meet the minimum criteria necessary to ensure correct use of medication (correct answer to the first 5 questions), thus obtaining a CPM score of 0. The mean CPM score was 0.2±0.5, the median 0 (0), the minimum 0 and the maximum 1,7. There were no differences in CPM according to age, time in treatment with the current biologic, disease duration, nº of previous biologics, gender, educational level, diagnosis, current biologic and nº of other concomitant drugs. Table I describes the scores obtained in each domain of the questionnaire. We noticed that if we ask the same questions orally, the patients knew more than what the questionnaire revealed.
Conclusion: The CPM-PT-PT obtained very low levels of patient's knowledge about the biologic therapy, that were not confirmed if the patients were asked orally. The authors believe that the writen interview underestimated the level of knowledge about biologic therapy in that population, suggesting the need to assess it during the clinical interview.

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P099 - FEATURES OF PATIENTS WITH RHEUMATIC DISEASES ADMITTED IN A RHEUMATIC INPATIENT UNIT: 8 YEAR EXPERIENCE

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TABLE I. REPRESENTATION OF DIFFERENT CATEGORIES IN RHEUMAT IC INPAT IENT UNIT BETWEEN 2011 AND 2018

	2011	2012	2013	2014	2015	2016	2017	2018
Number of in patients	81	100	81	91	83	79	90	88
Female (%)	53 (65,4)	59 (59)	46 (56,8)	60 (65,9)	57 (68,7)	45 (57)	59 (65,6)	54 (61,4)
Mean Age (±SD)	54,9 (±20)		55,2 (±21)	55,2 (±19,5)	56,1 (±20,6)	52,5 (±18,2)	55,14 (±18,5)	58,86 (±18,79)
Median day stay	12	9,5	7	8	9	10	8	6
Mean day stay (±SD)	20 ± 22,7	13,83 ± 13,7	9,2 ± 6,9	11,4 ± 10,9	11,26 ± 8,3	11,9 ± 8,5	10 ± 7,5	11 ± 13,85
Prolonged day stay (>21 days) (%)	19 (23,4%)	12 (12)	3 (3,4)	8 (8,8)	8 (9,6)	10 (12,7)	8 (8,9)	10 (11,4%)
Inflammatory rheumatic disease (%)	50 (61,7)	53 (53)	50 (61,7)	44 (48,4)	54 (65,1)	43 (54,4)	59 (65,6)	56 (63,6)
Crystal arthropathies (%)	5 (6,2)	17(17)	12 (23,5)	16 (17,6)	14 (16,9)	13 (16,5)	13 (14,4)	16 (18,2)
Osteoarticular and soft tissue infection (%)	28 (34,6)	16 (16)	14 (16)	11 (12,1)	5 (6)	10 (12,7)	7 (7,8)	5(5,7)
Osteoporotic fractures (%)	2 (2,5)	3 (3)	3 (3,7)	2 (2,2)	2 (2,4)	1 (1,3)	2 (2,2)	1 (1,1)
Others diagnosis	2 (2,5)	7 (7)	1 (1,2)	13 (14,3)	3 (3,6)	6 (7,6)	5 (5,6)	4 (4,5)
Without diagnosis	1 (1,2)	4 (4)	1 (1,2)	5 (54,9)	5 (6)	6 (7,6)	4 (4,4)	6 (6,8)
Deaths in Rheumatology Unit	0 (0)	1 (1)	0 (0)	1 (1,1)	0 (0)	1 (1,3)	0 (0)	2 (2,3)
Transfer to other services	1 (1,2)	7 (7)	6 (7,4)	3 (3,3)	1 (1,2)	2 (2,5)	4 (4,4)	4 (4,5)

Introduction: In recent years, a decrease in the number of hospital admissions of patients with rheumatic diseases has been reported in the literature. This has been explained by health policy reforms and better outpatient care with more appropriate access to effective therapies in an initial stage of the disease, leading to greater disease control. In order to confirm if our reality is in line with reported data, we reviewed hospitalizations in our unit in the last 8 years, namely the number of patients admitted per year, duration of hospitalization and patterns of diagnosis.1-4

Methods: We retrospectively collected demographic and clinical data about inpatients (age, gender, rheumatic condition, admission diagnosis), as well as duration of stay, number of deaths and transfers to other departments. Each admission was counted as a single event, although there was more than one hospitalization per patient. Variables were analysed as frequencies, averages and medians, as appropriate. Bivariate analysis was performed with Qui^2, t-student and Mann-Whitney tests.

Results: Over the 8-year review period, we admitted a total of 693 patients, with a stable average of 87 patients per year (minimum 79-maximum 100). There was a predominance of female patients throughout the period (62.5%). The mean age suffered a slight increase, changing from 54.9 ± 20 years in 2011 to 58.9 ± 18.79 years in 2018. Among the baseline diagnosis at admission, inflammatory rheumatic diseases predominated over the 8 years period (64.3%), and patients were admitted mainly due to disease activity/initial presentation (16.6%) or to infections (13.9%). Between 2011 and 2018 there was a decrease in the median duration of hospitalizations (12 days in 2011 vs 6 days in 2018, p <0.01), number of long (> 21 days) hospitalizations (23.4% in 2011 vs 11.4% in 2018, p <0.037) and joint and soft tissue infections as cause of hospitalization (34.6% in 2011 vs 5.7% in 2018, p <0.01). The causes of longer length hospitalizations remained stable during the 8-year period: septic arthritis (46%), disease flare (26.4%), sepsis/nosocomial infections (11.4%). Five deaths were recorded during the period. 28 patients were transferred to other departments, the main reason being endocarditis with subsequent transfer to the infectious disease department (5 cases). (Table I)

Conclusion: The number of hospitalizations in our center during the preceding 8 years remained stable, on the contrary to what has been reported in the literature. Our unit belongs to a tertiary hospital that receives patients from a broad population without access to a Rheumatology department, which probably influences this number. There was a significant decrease in the average length of hospital stays, as well as in the number of long-term hospitalizations, probably reflecting better patient care and disease control. This is

also explained by the significant reduction of admissions due to joint or soft tissue infections, which usually motivates longer length admissions for intravenous antibiotherapy. These results highlight the importance of a Rheumatology inpatient unit in a tertiary center, namely to receive patient with rheumatic inflammatory diseases with acute presentation/flare that requires inpatient management and treat patients with infectious complications or septic arthritis that demand hospitalization.

P100 - INTERSTITIAL PNEUMONIA WITH AUTOIMMUNE FEATURES: A SINGLE CENTER EXPERIENCE AND THE IMPORTANCE OF A MULTIDISCIPLINARY APPROACH

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Background: Interstitial lung disease (ILD) remains a significant cause of morbidity and mortality in patients with connective tissue diseases (CTD). Interstitial pneumonia with autoimmune features (IPAF) is a subset of ILD with clinical features suggestive of but do not definitive for a CTD. IPAF is a new concept relatively unknown to rheumatologists. A multidisciplinary approach to diagnosis and management of IPAF patients is essential, involving close interaction between pulmonologists, rheumatologists, radiologists and pathologists.

Objectives: Revision of ILD patients followed at a specialized tertiary hospital's ILD department and description of their clinical characteristics and multidisciplinary approach.

Methods: The study was conducted according to the declaration of Helsinki. All patients who met the Fischer criteria for IPAF in 2000-2018 were identified. Clinical characteristics, comorbidities, ILD subtype, pulmonary function tests, baseline serologies and treatment strategies were collected. The consents from a multidisciplinary meeting and Rheumatology referral and evaluation were also recorded.

Results: We identified 8 cases fulfilling classification criteria for IPAF (4 [50%] female); mean age 64.9 years (range 34-83); past smoking was referred in 5 (62.5%) patients with an average of 54.15 smoking pack years. Overall, 4 (50%) patients were exposed to organic dusts and 2 (25%) to inorganic dusts. Arterial hypertension was the most frequently recorded comorbidity (50%). Among the 8 patients, 6 (75%) had at least 1 feature from the serologic and morphologic domains, 1 patient had at least 1 feature from clinical and serologic domains and 1 patient had at least 1 feature from all 3 domains. From those meeting "suggestive radiology pattern based on high resolution chest CT (HRCT)", 2 had nonspecific interstitial pneumonia (NSIP) and 1 had organizing pneumonia (OP). Biopsy (3 transbronchial cryobiopsies and 1 transthoracic biopsy) were conclusive in 4 patients (2 NSIP, 1 lymphoid interstitial pneumonia and 1 OP). Usual interstitial pneumonia (UIP) pattern was observed in two patients. Antinuclear antibodies were positive in 5 (62.5%) patients. Overall, 5 (62.5%) clinical cases were discussed in a multidisciplinary meeting including revision of imaging and biopsies. A Rheumatology appointment was requested in 5 patients to investigate a possible CTD diagnosis. Six (75%) patients had pulmonary function tests (PFT) and diffusing capacity of the lung for carbon monoxide (DLCO) results recorded at baseline: 4 patients had a DLCO below 70% (33.8 – 61.8%), 3 patients had normal PFT, 1 had restriction pattern and 2 had small airways obstruction. During a median of 2.7 years of follow-up, none of the patients progressed to a definitive diagnosis of CTD. Pharmacological treatment was prescribed in 6 patients, including corticosteroids (5), DMARDs (3), antifibrotic therapy (2) and azithromycin (2).

Conclusion: IPAF is a relatively new and developing concept. Rheumatologists and pulmonologists should share their experience to uniformize terms and classifications, recognize relevant clinical patterns and optimize management of those affected with CTDs and ILD and IPAF.

References: Eur Respir J 2015; 46; 976-987

P101 - SHORT-TERM OUTCOMES IN LOW BACK PAIN PATIENTS TREATED IN PRIMARY HEALTH CARE IN PORTUGAL

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Background: Low back pain (LBP) is the leading cause of disability in Portugal and worldwide. The majority of the patients use primary health care services but the treatment outcomes are unknown. Findings of prognostic studies indicate that a marked reduction in mean pain and disability is expected in the first 6-8 weeks, for acute or persistent LBP. Beyond that time frame period, improvement slows and thereafter the probability to develop a persistent disabling back pain condition improves. Therefore, it seems important to measure the patients' outcomes at this time-point to better assess the effectiveness of the care provided.
Objetives: This study aims to describe the short-term outcomes for LBP patients treated in a primary health care centre in Portugal and to identify the prognostic factors for non-recovery and poor health related quality of live (HRQoL).
Methods: 116 patients with LBP were consecutively recruited from 7 different primary care units in Portugal. Baseline assessment includes socio-demographic and clinical data, psychosocial factors, pain, disability, and HRQoL. Pain, disability and HRQoL were then assessed at 8-weeks follow-up. A Global Rating of Change Scale to assess patient perception of improvement with treatment was added in the follow-up reassessment. Recovery criteria were determined according to the Minimal Clinically Important Difference established for pain and disability (reduction of ≥30% from baseline). The EQ-5D,3L index was dichotomised into 'poor' HRQoL (<0.6) and 'good' HRQoL (≥ 0.6), based on a proposed cut-off for having sufficient capacity to be able to work for a population with LBP. The relationship between variables on baseline and non-recovery/ 'poor' HRQoL was modulated through logistic regression.
Results: Of the 116 participants enrolled, 110 completed the 8-weeks follow-up. (mean age of 48,06±11,41). Approximately half of the participants (53.4%) were acute presentations of LBP. The main treatment strategy was medication (83.5%), with only 8.3% of patients having been referred for physiotherapy. At 8 weeks follow-up, there were statistically significant improvements on pain, disability and HRQoL (p≤ 0.05). However, 38% of the patients reported they felt the same or worse, 76.4% had a poor HRQoL, and only half of the patients reached the established recovery criteria (49% in disability and 50% in pain). In the adjusted model, the probability of non-recovery (p≤0.05) was associated with the presence of maladaptive psychosocial factors (OR: 1.65, 95% CI 1.13-2.40, for pain; OR: 1.61, 95% CI 1.15-2.24, for disability), a chronic pain condition (OR: 1.71, 95% CI 1.33-1.88, for pain; OR: 1.76, 95%CI 1.43-1.89, for disability), and high levels of pain at baseline for pain (OR: 1.26, 95%CI 1.09-1.39). Poor HRQoL was associated to the female gender (OR: 1.88, 95%CI 1.61-1.96), chronic pain condition (OR: 1.68, 95%CI 1.03-1.89) and high levels of pain intensity at baseline (OR: 1.36, 95%CI 1.11-1.67).
Conclusions: These results suggest there is a room for improvement in the healthcare delivered to LBP patients in the Portuguese primary healthcare setting.

P104 - ANTI-RO/SSA AND ANTI-LA/SSB POSITIVE PREGNANT WOMEN - EXPERIENCE FROM A TERTIARY CENTRE

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Background: Neonatal lupus (NL) syndrome results from passively acquired autoimmunity resulting from transplacental transfer of maternal anti-Ro/SSA (52 or 60 kD) or La/SSB (48 kD) antibodies. This syndrome may cause mucocutaneous, hematologic or hepatic ab-

normalities, although the most feared manifestation is the development of congenital complete heart block (CCHB). The estimation of CCHB incidence for anti-Ro/SSA positive pregnant patients is highly variable among studies, and the recurrence risk is higher in subsequent pregnancies. Considering these discrepancies in incidence rates and the available treatments for CCHB, the need to screen with regular fetal echocardiograms pregnant women with this autoantibody profile is currently controversial. With this study we aim to characterize our cohort of pregnant women positive for anti-Ro/SSA or La/SSB and to assess the prevalence of CCHB in their offspring.

Methods: We conducted a retrospective study in the cohort of pregnant women with rheumatic inflammatory diseases, in a tertiary care hospital, from 2014 to 2018. We analized patients with positivity for anti-Ro/SSA or La/SSB antibodies detected by fluoro-enzyme immunoassay, whose pregnancy was closely monitored by a multidisciplinary team composed of experienced rheumatologists and high-risk pregnancy obstetricians. Serial fetal echocardiograms with Doppler were performed between weeks 16 and 24. We collected demographic and clinical data, current medication, echocardiogram results and pregnancy outcomes. Results are described as frequencies or means as appropriate. Spearman correlation and Qui-square test were used to assess the association between variables.

Results: In the last 5 years, 35 anti-SSA/SSB positive pregnant women were followed up at our clinic from a total cohort of 290 pregnant women with inflammatory rheumatic diseases. We reviewed 37 pregnancies (2 patients had 2 pregnancies) occurring at a mean age of 34.1 ± 5.2 years; 82.9% were caucasian, all of them positive for anti-Ro/SSA and 16 (45.7%) also positive for anti-La/SSB. Diagnosis are specified in Table I. 32 patients (91.5%) were under treatment with hydroxychloroquine (HCQ). Other immunosuppressants used were prednisolone, in 24 pregnancies (dose range 5-15 mg id) and azathioprine, in 9 pregnancies (dose range 50-150 mg id). There were no cases of CCHB, however there were 3 cases of adverse pregnancy outcomes: one fetal loss at week 14 in a patient with previous negative antibodies that developed low anti-Ro/SSA titers during pregnancy and had a second pregnancy in the following year without adverse events; one case of hematologic NL syndrome; and one case of intrauterine growth restriction. There were 21 vaginal deliveries and 16 cesarean sections (CS) – reasons for CS were previous CS (n=5), failure to progress in labor (n=4), abnormal fetal positioning (n=3), fetal distress (n=3) and maternal adverse health condition (n=1, a case of cholestasis of pregnancy). There was no association between clinical/laboratory data and pregnancy outcomes.

TABLE I. MOTHER DIAGNOSIS (N=35)

Diagnosis	N (%)
Systemic lupus erythematosus (SLE)	21 (60)
Secondary antiphospholipid syndrome	6 (17.1)
Secondary Sjögren syndrome	3 (8.6)
Primary Sjögren syndrome	4 (11.4)
Undifferentiated connective tissue disease	6 (17.1)
Mixed connective tissue disease	1 (2.9)
Rheumatoid arthritis with secondary Sjögren syndrome	1 (2.9)
ANCA-associated vasculitis	1 (2.9)
SLE/Dermatomyositis overlap	1 (2.9)

Conclusions: These data support the low prevalence of CCHB. Although not powered for that analysis, it should be highlighted that almost all our patients were treated with HCQ, for which recent studies suggest a protective role on fetal cardiac tissue, thus probably influencing our results. We also found a high rate of cesareans compared to the general population, as previously described for systemic lupus erythematosus and other connective tissue diseases patients. Results are limited by the dimension of the sample.

P105 - PROGNOSTIC FACTORS ASSOCIATED WITH AN EARLY RESPONSE TO PHYSIOTHERAPY TREATMENT IN PATIENTS WITH CHRONIC NONSPECIFIC NECK PAIN: AN EXPLORATORY PROGNOSTIC MODEL

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Background: Chronic nonspecific neck pain (CNP) is a common health problem worldwide. Previous studies identified sociodemographic and clinical factors associated with successful outcomes in patients at dis-

charge of physiotherapy treatment. However, the prognostic factors associated with an early response to physiotherapy treatment in patients with CNP are unclear. This knowledge may allow to identify a profile of patients with higher odds of improvement at the beginning of treatment, supporting clinical decision-making considering benefits versus non-benefits at short-term.
Objectives: This study aimed to identify prognostic factors associated with an early successful response to Physiotherapy treatment in patients with CNP. The successful response was defined as a reduction on disability of ≥30% after 3-weeks of physiotherapy treatment.
Methods: A prospective cohort study was conducted on 52 patients with CNP lasting ³3 months, undergoing a physiotherapy treatment programme of mobilisation and exercise (coordination, strength, endurance). Patients were assessed at baseline, and then 3-weeks later. Participants were categorised as having a successful outcome if they scored a difference in their disability above the Minimal Clinical Important Difference (MCID) of the Neck Disability Index (NDI). Logistic regression analysis (backward stepwise conditional method) was used to identify the associations between baseline prognostic factors and outcome. Socio-demographic and clinical characteristics of CNP were included as potential prognostic factors.
Results: A total of 51 participants completed the intervention. At 3-weeks post-treatment, 75% (38/51) of the participants achieved a successful response to physiotherapy treatment. In the final multivariate model (Omnibus Tests p<0.001), an early successful response to Physiotherapy treatment was significantly associated with the disability score (OR 1.16 – CI 95% 1.02--1.32), and pain intensity (OR 1.81 – CI 95% 1.03--3.20) at the baseline. This model improves the classification ability from 74.5 to 86.3%, explaining 50.6% of the outcome, with good predictive ability of sensibility (94.5%) and modest specificity (61.5%). The area under the ROC curve for disability score (0.8; 95% CI: 0.6-0.9) and pain intensity (0.7; 95% CI: 0.5-0.9) indicated good and acceptable discriminatory ability, respectively. After 3-weeks of mobilisation and exercise, the patients with scores ≥12 on NDI and ≥7 on Numeric Pain Rating Scale at baseline have increased odds of achieving an early response to treatment in the presence of both variables (+LR=1.71 95% CI: 0.84-3.50) or one variable (+LR=1.45 95% CI: 0.69-3.04).
Conclusions: This study suggests that patients with medium to high levels of disability and high levels of pain at the baseline, treated with a physiotherapy programme of mobilisation and exercise, are more likely to experience an early reduction on their disability score.

P108 - ANTI-CCP POSITIVO, SEM AR - A QUE PODERA CORRESPONDER?

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Introdução: O diagnóstico precoce da Artrite Reumatóide (AR) é fundamental para uma abordagem adequada e atempada, interferindo assim no outcome funcional desta patologia. O anticorpo contra péptidos citrulinados (anti-CCP) é um biomarcador útil no diagnóstico da AR, apresentando uma especificidade superior ao fator reumatóide (FR). Além disso, o anti-CCP pode mesmo ser positivo ainda antes do aparecimento clínico da doença, tornando o diagnóstico precoce da AR, por vezes, num desafio. O anti-CCP apresenta uma especificidade diagnóstica de 95 a 99%, valor este que aumenta se superior a três vezes o valor de referência.
Objetivo: Partilhar e alertar a população médica para a possibilidade de aparecimento de doentes com anti-CCP positivo sem evidência clínica de AR.
MÉTODO: Através da consulta do processo clínico informático, identificámos e analisámos um conjunto de doentes, observados por um Reumatologista, que apresentavam analiticamente anti-CCP positivo apesar de clinicamente não manifestarem sintomas nem sinais de artrite, durante um follow-up de pelo menos seis anos. Foram excluídos os doentes com outras patologias reumáticas associadas, antecedentes de tuberculose ou doenças pulmonares crónicas.
Resultados: Identificámos sete doentes (com média de idades de 61 anos) com anti-CCP positivo em pelo menos duas determinações distintas. Quatro apresentavam além do anti-CCP positivo também FR positivo. De destacar ainda, que cinco apresentavam valor de anti-CCP superior a três vezes o normal (<15 UA/mL). Após, pelo menos, seis anos depois do primeiro anti-CCP positivo verificámos que nenhum dos doentes desenvolveu clínica de AR e como diagnósticos principais, até à data, foram descritos os seguintes: dois doentes com quadro de lombalgia mecânica associada ao esforço ou por alterações degenerativas da coluna lombar; dois com Fibromialgia; dois com gonartrose e

um com tendinopatia da coifa dos rotadores.
Conclusões: Estudos revelam que a especificidade do anti-CCP e FR positivos um ano e meio antes do diagnóstico de AR é de cerca de 99 a 100%, o que significa que podem preceder o diagnóstico clínico de AR em indivíduos aparentemente saudáveis. Contudo, tal como constatámos, não é incomum encontrar durante a prática clínica indivíduos com anti-CCP positivo e sem artrite objetivada, o que nos leva a enfatizar a importância de uma anamnese detalhada e exame objetivo cuidado antes de estabelecer um diagnóstico baseado na analítica de cada doente.

P112 - EFFECTIVENESS AND SAFETY OF FEBUXOSTAT: EXPERIENCE FROM A TERTIARY PORTUGUESE CENTER

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Background: Gout remains a disabling and prevalent rheumatic disease. Patients (pts) with recurrent articular flares, tophi, urate arthropathy or renal stones should be treated with urate-lowering therapy (ULT) lifelong. For more than 40 years, allopurinol was the gold standard ULT. However, pts who are refractory or intolerant to allopurinol or who have impaired renal function, may benefit from an alternative ULT, namely febuxostat. Several trials support the efficacy and safety of this newer drug, although real world data characterizing the Portuguese experience with this drug is lacking.
Objectives: To characterize a cohort of pts treated with febuxostat followed at our crystal arthropathy clinic and to evaluate the efficacy and safety of this drug in the portuguese population.
Methods: We conducted a retrospective study in the cohort of pts followed at our dedicated clinic with the diagnosis of gout who started febuxostat treatment between 2015 - when our hospital board first approved this drug - and 2018. We collected demographic and clinical data, including associated comorbidities, febuxostat dosing, SUA and estimated glomerular filtration rate (eGFR) before and after ULT initiation, frequency of arthritic flares, tophi reduction and adverse reactions. Variables are described as frequencies or means ± standard deviations. Comparison of means was done by applying the dependent-samples t-test.
Results: In the preceding 4 years, a total of 23 gout pts began treatment with febuxostat. Demographics, disease phenotype and duration, comorbidities, reasons for febuxostat initiation and duration of treatment are specified in Table I. All patients initiated the treatment with 40 mg daily titrated to 80 mg in 13 pts (56.5%) and to 120mg in 4 pts (17.4%), according to SUA level and tolerance. After 3 months of therapy, SUA levels significantly decreased from a mean of 8.7 mg/dL to 6.4 mg/dL (p=0.001), with a further decrease to 5.1 mg/dL after 6 months (p<0.001). eGFR did not significantly change after treatment, from a mean 54.9 mL/min/1.73m2 to 52.3 mL/min/1.73m2 at 3 months and 55.9 mL/min/1.73m2 at 6 months. 7 pts (30.4%) reported arthritic flares in the first 6 months after febuxostat initiation. 6 pts (42.9%) with tophaceous gout noticed a subjective reduction in the number and

TABLE I. DEMOGRAPHIC AND CLINICAL DATA OF OUR COHORT OF PTS TREATED WITH FEBUXOSTAT

Demographics	
Males, N (%)	20 (87%)
Age (mean ± standard deviation)	66.9 ± 9.6 years
Disease Phenotype, N (%)	
Tophaceous gout	14 (60.9%)
Non tophaceous gout	8 (34.8%)
Asymptomatic hyperuricemia	1 (4.3%)
Disease duration (mean ± standard deviation)	15.9 ± 10.4 years
Comorbidities, N (%)	
Hypertension	22 (95.7)
Chronic kidney disease (eGFR<60 mL/min/1.72m²)	16 (69.6)
Dyslipidemia	11 (47.8)
Diabetes mellitus	6 (26.1)
Reasons for febuxostat initiation, N (%)	
Inadequate response to allopurinol	11 (47.8%)
Allopurinol allergy	9 (39.1%)
Chronic kidney disease progression	3 (13%)
Duration of febuxostat therapy, (mean ± standard deviation)	15.3 ± 13.8 months

size of their tophi. Pts with tophi reduction were on higher doses of febuxostat (106.7 vs 80 mg, p=0.025). Adverse events related to febuxostat occurred in 4 patients (17.4%) - 1 patient developed hyperkalemia that was corrected with resins; 3 pts had adverse events that led to drug discontinuation (hepatotoxicity (n=1), thrombocytopenia (n=1) and hospitalization due to decompensated heart failure and kidney function deterioration requiring dialysis (n=1)). No further adverse reactions were detected in this cohort.

Conclusions: Febuxostat was an effective and well-tolerated drug in this cohort of Portuguese pts with gout, refractory or intolerant to allopurinol, with a high cardiovascular risk, allowing a significant decrease of SUA levels. The majority of patients had chronic kidney disease but eGFR remained stable under tis therapy. The dimension of the sample limits the results.

P113 - ARE CIRCULATING BLOOD BIOMARKERS FOR INFLAMMATORY RHEUMATIC DISEASES GENDER-DEPENDENT? SYSTEMATIC REVIEW BASED ON OMICS DATA

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Background: Inflammatory rheumatic diseases (IRDs) are thought to be multifactorial diseases. Female-male ratio in IRDs differs according to the disease. In Rheumatoid Arthritis (RA) and Systemic Lupus Erythematosus (SLE) female prevalence is higher opposing to Ankylosing Spondylitis (AS). Until recently, differences on gender-bias observed in predisposition to IRDs, and to their pathophysiologies have been understudied and neglected. Recent research using omics approaches shows that genderbias is outspread in a diversity of pathologies. The integration of omics results, spite the extremely complex crosstalk among the several biomolecules involved, places these methods at the lead of medical research, overcoming limitations and increasing the forecasts of targeted methodologies.

Objectives: The purpose of this systematic review is to aggregate existing omics results on biomarkers for RA, SLE and AS to raise awareness about whether gender can actually play a role on their profiles.

Methods: Two searches were conducted on PUBMED database (22nd November 2018) with a final output of 81268 articles. Both searches were sorted by best matches and for the second thousandth articles ranked no relevance was found for the aim of this review. The first 1000 articles were further analyzed based on the title, abstract and content. Three articles having relevant results were selected from the first thousand publications. Ten more were identified from the cross-references of both searches. The PICO (P, population; I, intervention; C, comparison; O, outcome) concept was used to perform the analysis according to: Patients: adults (>18 years old) with RA, SLE or AS (SpA); Intervention: any – omic study; Comparison: gender information regarding results; Outcomes: identified genes, proteins or metabolites.

Results: Dectin-2, MCP-1 and DC-SIGN polymorphisms where proposed as possible accounts for gender associated differences in susceptibility to RA. Sex-differentiated and sex-interaction analyses of a GWA study revealed strong evidence of association in both sexes, highlighting links with RA only in one of the genders. Several transcriptomic studies pointed to gender differences on biomarkers profiles for the three diseases. For instance, different expression levels of TNFα, IL-6, IL-17, IL-18, IFNα as well as X or Y chromosome-linked genes were found in SLE and/or AS. In AS, male patients with syndesmophytes showed higher levels of TNFα and men without syndesmophytes presented higher levels of VEGF, IL-6, TNFα and IL-18 both compared to females-matched. In RA patients, microRNAs 222, 532, 98, and 92a were found significantly down regulated in PBMC of female versus male13. Six genes displayed a gender-biased expression among male and female SLE patients.

Conclusion: Blood biomarkers signatures for the IRDs analyzed in this study have been shown gender-biased. These will contribute for a better understanding of these diseases pathophysiology and probably to different gender approaches regarding diagnosis, monitoring and therapeutic approach.

P116 - GAIT 3D KINEMATICS UNVEILS A SPECIFIC PATTERN IN PATIENTS IN EARLY YEARS OF AXIAL SPONDYLOARTHRITIS INDEPENDENT OF THEIR BODY COMPOSITION AND MUSCLE PERFORMANCE VARIABLES.

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Background: Axial spondyloarthritis (axSpA) is a chronic inflammatory rheumatic disease characterized by a progressive mobility reduction of the rachis. The postural changes may cause balance problems with gait repercussions. However, we lack information during the early years of the disease regarding gait pattern and the possible variables that may influence gait parameters.
Objectives: In order to gain insight into the gait patterns in patients at early stages of axSpA and the potential influence of some patient-specific features, the aim of this study was therefore to evaluate: (i) the 3D gait signature in patients at early years of axSpA; and (ii) the relation between gait parameters, and body composition and muscle performance variables.
Methods: A cross-sectional study was conducted on 46 participants (18-50 years old), 23 patients with axSpA (according to ASAS criteria, with less than 10 years since symptoms onset) and 23 healthy controls, matched by gender and age, with a mean age of 37±7.5 years, predominantly males (60%). The patients with axSpA had 5±3.2 years of disease duration, with BASDAI and BASFI of 3±2.2 and 2±2.9, respectively. Subjects' movement was reconstructed using a 3D full-body kinematic model (Kinetikos, Coimbra, Portugal) fed by 15 inertial sensors placed in the head, arms, trunk, pelvis, thighs, shanks and feet. The primary outcomes comprise the general gait parameters such as gait deviation index, speed, cadence, stance duration, body vertical regularity (sample entropy), step length, range of movement and peak velocity of the different joints. Body composition was assessed by performing octapolar multifrequency bioelectrical impedance analysis (BIA; InBody 770). Muscle performance was assessed with a 60 second sit-to-stand test (STS60), while physical activity was controlled by the international physical activity questionnaire (IPAQ).

Variables (except age, disease duration, BASDAI, BASFI) are presented as median. Non-parametric tests were used to compare groups. Correlations between gait, body composition and skeletal muscle function parameters, were performed.
Results: Gait analysis showed statistically significant differences between axSpA and healthy control groups on gait deviation index (median 83 vs 87%, p=0.022, with higher score values representing similar performance to normal movement), speed (median 0.79 vs 0.85m/s, p=0.015), stance duration at the left side (median 68 vs 67s, p=0.027), left step length (median 0.47 vs 0.49m, p=0.008), and vertical regularity (median 0.39 vs 0.33, p=0.029, with higher values representing a less regular and predictable movement pattern). At the sagittal plane, patients showed higher values of left arm maximum flexion (median 14 vs 10°, p=0.011), lower lumbar extension peak velocity (median 45 vs 60°/s, p=0.016) and higher ankle angular peak velocity on right side (median 330 vs 299°/s, p=0.020).
However, no statistically significant differences between groups were found for physical activity. In addition, no statistically significant correlation was found between the gait parameters and weight, body fat, torso fat, visceral fat, body mass index, total body water, extracellular water, fat free mass, lean mass, bone mineral content and STS60.
Conclusion: These results provide evidence that although young axSpA patients at early years of the disease display a particular gait pattern and this behavior does not seem to be influenced by the body composition and muscle performance. The main determinant for this gait pattern remains an open question.

P118 - THE BIOEFFICACY SPA PROTOCOL: BIOMARKERS OF TUMOR NECROSIS FACTOR INHIBITORS EFFICACY IN ANKYLOSING SPONDYLITIS PATIENTS USING A TRANSCRIPTOME ANALYSIS AND MASS SPECTROMETRY.

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Background: Ankylosing Spondylitis (AS) is the prototypic disease of the seronegative spondyloarthritis. Inflammatory back pain is a characteristic symptom, and new bone formation with syndesmophytes and ankylosis is the hallmark of this condition, which. typically affects young people and leads to deterioration of physical function and quality of life. The introduction of biological therapies has changed clinical practice impacted significant improvement in quality of life and prognosis. However, about 40% of patients do not present an adequate response. The identification of biomarkers of treatment response would greatly benefit clinical management by targeting these treatments to those most likely to respond.
Methods: Bioefficacy SpA is an investigator-initiated prospective, single-arm, open-label, multicentric trial, involving 7 national Rheumatology departments.
Patients older than 18 years, with the diagnosis of Ankylosing Spondylitis (AS) (1984 modified New York Criteria, allowing the diagnosis of sacroiliitis by magnetic resonance imaging (MRI) and active disease despite optimal conventional treatment (Portuguese recommendations for the use of biological therapies in patients with axial spondyloarthritis – December 2011 update), were included. All patients started a tumor necrosis factor inhibitor (TNFi), adalimumab, and were follow-up for a period of 14 weeks.
The primary outcome of this trial was to identify new candidate genes/proteins that are differentially expressed in responders vs non-responders to TNFi, using transcriptomic and proteomic approaches, and explore their ability to predict TNFi response. Key secondary outcomes included: composite indexes for disease activity- Assessment of Spondyloarthritis International Society (ASAS) and Ankylosing Spondylitis Disease Activity Score (ASDAS); Disease function- Bath Disease Ankylosing Spondylitis Functional Index (BASFI) and severity- Bath Ankylosing Metrology Spondylitis Index (BASMI) and the modified Stoke Ankylosing Spondylitis Spinal Score (mSASSS); general quality of life (QoL) assessment- 36-Item Short Form Survey (SF-36) and EuroQoL 5 dimensions Questionnaire (EQ-5D); disease specific QoL assessment- Health Assessment Questionnaire for AS (HAQ-AS) and Ankylosing Spondylitis Quality of Life Questionnaire (ASQOL), psychological impact- Hospital Anxiety and Depression Scale (HADS); MRI changes under TNFi. At week 14, patients were classified as responder vs non-responder according to ASAS20 achievement.
Results/Conclusions: The results from Bioefficacy SpA are expected to have implications in clinical practice, allowing the development of an algorithm to identify the best candidates to TNFi therapy. Bioefficacy SpA will also contribute to understand the impact of TNFi therapy on axial spine and muscle through MRI assessment. This trial was registered in the clinical trials.gov database (https://www.clinicaltrials.gov/NCT02492217).
Acknowledgments: This investigator-initiated trial was supported by a research grant from Abbvie.

P119 - RHEUMATOLOGY ROLE IN HOSPITALIZED PATIENTS' MANAGEMENT IN A TERTIARY HOSPITAL

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Introduction: Consultation of patients admitted in other hospital wards is a relevant part of the activities of a Rheumatology Department and residents' training. Request for observation of patients admitted in other departments is rising. Admitted patients have multiple comorbidities, requiring a multidisciplinary approach to manage disease and medication complications. During the previous 2 years we have implemented a structured web-based request for Rheumatology observation of inward patients. Our aim was to review these re-

TABLE I. REQUESTING DEPARTMENTS AND MAIN DIAGNOSTIC CATEGORIES

	Crystal deposition diseases	Diffuse connective tissue diseases	Joint/soft tissue infections	Osteoarthritis	Periarticular disorders	Spondyloarthritis	Osteoporosis and mineral disorders	Other *	Total
Internal Medicine	66	28	11	12	12	2	2	10	143
Dermatology	4	21	5	3	2	6	5	6	52
Pneumology	3	13	0	1	2	1	1	0	21
Infectious diseases	7	0	6	1	1	2	0	3	20
Cardiology	8	8	1	2	0	0	0	0	19
Nephrology	4	5	2	0	1	1	0	1	14
Gastroenterology	4	3	0	0	0	3	1	3	14
Haematology	2	0	0	1	0	1	0	6	10
Neurology	3	0	0	2	0	1	1	1	8
Surgery	2	4	1	0	0	0	0	0	7
Intensive care units	3	1	0	0	3	0	0	0	7
Psychiatry	0	2	0	2	0	0	0	0	4
Vascular surgery	1	2	0	0	0	0	0	0	3
Ear, nose and throat	0	2	0	0	0	0	0	0	2
Paediatrics	0	1	1	0	0	0	0	0	2
Ophthalmology	0	0	0	0	0	0	0	1	1
Obstetrics	0	0	0	0	0	0	0	1	1
Urology	0	0	0	0	1	0	0	0	1
Total	107	90	27	24	22	17	10	32	329

*Sickle cell disease, consumptive syndrome under investigation, non-specific arthralgia, viral infections with musculoskeletal symptoms, paraneoplastic syndromes.

quests and characterize the patients in need of specialized Rheumatology care.

Methods: We retrospectively collected patient demographic data, requesting departments, and diagnosis. Descriptive analysis was performed using frequencies and means (±standard deviations).

Results: We had 329 requests for consultation over a period of 2 years, with an average 1.3 observations per patient. 51.1% patients were males with a mean age of 65 ± 19 years old. Request for observation came from 22 different departments, namely Internal Medicine (43.5%), Dermatology (15.8%) and Pneumology (6.4%). The majority of patients had flares of crystal deposition diseases, with gout being responsible for 19.4% of the requests, followed by calcium pyrophosphate deposition disease (13.1%). The other main diagnosis were: skin/soft tissue infections for exclusion of joint involvement (8.2%), osteoarthritis (7.3%), periarticular disorders (6.7%) and spondyloarthritis (5.2%). 27.4% of requests were for patients with a suspected or confirmed diffuse connective tissue disease. In 7 cases (2.13%), the request was specifically to adjust immunosuppressive therapy in inpatients with rheumatic inflammatory diseases. Five observations were due to myelotoxicity from immunosuppressive therapy. In Table I we show the distribution of the main categories of diagnosis by requesting department.

Conclusion: Consultation to other departments was a major part of our activity regarding inpatient care. Crystal deposition diseases are prone to flare during acute illness and were responsible for the majority of the requests for observation. The rising need for Rheumatology consultation for other departments reveals an important part of our role in the care of hospitalized patients, managing comorbidities, aiding in diagnosis and treatment decision.

P120 - GO-DACT: A RANDOMIZED DOUBLE-BLIND PLACEBO-CONTROLED PROOF-OF-CONCEPT TRIAL OF GOLIMUMAB PLUS METHOTREXATE (MTX) VERSUS MTX MONOTHERAPY, IN IMPROVING DACTYLITIS, IN MTX NAIVE PSORIATIC ARTHRITIS PATIENTS

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Background: Psoriatic arthritis (PsA) dactylitis is associated with an increased risk of erosions and higher disease activity. Dactylitis treatment strategies are however controversial due to the absence of evidence from randomized controlled trials studying dactylitis as a primary outcome.
Objectives: To assess the efficacy of golimumab plus MTX versus placebo plus MTX for active dactylitis in PsA patients, in a phase 3b trial.
Methods: GO-DACT was a proof-of-concept multicentric, investigator-initiated randomized, double-blind, placebo-controlled, parallel-design trial, conducted in 13 Portuguese Rheumatology Centers. PsA patients, fulfilling the ClASsification for Psoriatic ARthritis criteria, naïve for MTX and biologic disease modifying anti-rheumatic drugs (bDMARDs), with active dactylitis, were randomly allocated to either golimumab in combination with MTX or MTX monotherapy. The primary endpoint was the change from baseline in the dactylitis severity score (DSS) assessed at week 24. Key secondary endpoints included DSS response rates and the magnetic resonance imaging (MRI) dactylitis score, as well as composite indexes of PsA activity.
Results: 44 patients were centrally randomized, 21 to golimumab plus MTX and 23 to placebo plus MTX, for 24 weeks, and 1 patient from each arm dropped out. Due to favorable results on a planned interim analysis recruitment was halted. The median MTX dose reached in the golimumab plus MTX group was 15mg/week and in the MTX monotherapy group 20mg/week. The median baseline DSS was 6 in each arm. Patients treated with golimumab plus MTX experienced significantly greater improvements in the DSS at week 24 (median change of 5) as compared to the MTX group (median change of 2) ($p=0.026$). At week 24, 12 (60.0%) patients treated with golimumab plus MTX and 4 (18.2%) with MTX, achieved the DSS70 response ($p<0.05$). Significant differences were also observed in the median changes from baseline to week 24 in MRI dactylitis score, Disease Activity Score 28 (DAS28), Disease Activity Index for PsA (DAPSA), PsA Disease Arthritis Index (PASDAS) and Target Nail Psoriasis Severity Index (tNAPSI), favoring the golimumab and MTX association. Likewise, higher proportions of patients treated with golimumab plus MTX achieved DSS50 responses and the American College of Rheumatology 20/50 responses, at week 24. There were no new safety issues for golimumab during this trial.
Conclusion: GO-DACT suggests additional benefits from the combination of golimumab and MTX as first-line bDMARD therapy versus MTX monotherapy, in the treatment algorithm of PsA active dactylitis.
Funding: This investigator-initiated trial was supported by a research grant from MSD including golimumab and placebo supplies. MSD had no influence on trial design or data analysis.

P121 - AXIAL SPONDYLOARTHRITIS INDUCES MUSCLE DISFUNCTION, THE ROLE OF BODY COMPOSITION PARAMETERS: MYOSPA STUDY

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TABLE. SUBJECT CHARACTERISTICS

Variable	Patients N=27	Controls N=27	p-value
Age (years)	37 (32-43)	36(30-44)	0.808
Gender (□% : □%)	66.7:33.3	66.7:33.3	0.922§
Symptom duration (years)	7.0 (4.0-10.0)	------	------
IPAQ (low% : moderate-high%)	29.2:70.8	20.8:79.2	0.505§
Body height (cm)	170.2 (164.1-176.9)	173.0 (165.4-178.0)	0.522
Body mass (kg)	73.1 (66.9-85.6)	69.7 (64.8-79.6)	0.347
Body Mass Index (kg/m²)	25 (22.9-29.9)	23.6 (23.1-29.9)	0.303
LM (Kg)	50.1 (44.5-57.8)	54.1 (43.2-60.2)	0.592
BF (Kg)	19.8 (12.1-29.1)	15.7 (10.1-22.2)	0.041
TF (Kg)	10.3 (6.3-15.9)	8.1 (5.1-11.1)	0.045
VF Area (cm2)	87.3 (52.7-145.1)	65.4 (41.8-96.4)	0.034
MS_DUL (Kg)	46.0 (37.5-70.6)	71.2 (54.1-83.4)	0.006
STS60 test (repetitions)	48.0 (27.5-64.3)	63.0 (53.0-68.0)	0.010

*Values are median (IQR) unless otherwise indicated. □Comparison between patients and controls tested by paired samples □-test unless otherwise indicated. §Comparison between patients and controls tested by Chi-Square test in Gender and Physical Activity variables.

Background: Sarcopenia as well as abnormalities in body composition are common features in several chronic diseases and have been shown to lead to increased morbidity and mortality. However, their assessment in young patients with axial spondyloarthritis (axSpA) has not been performed thus far.
Objectives: To assess the skeletal muscle mass, strength and performance as well as body composition in patients with axSpA compared to healthy controls.
Methods: Patients between 18 and 50 years of age with the diagnosis of axSpA and short disease duration (under 10 years) and classified according to the ASAS criteria were included. Healthy individuals matched by gender and age (1:1) were used as control group. Muscle strength (MS) was assessed by resisted flexion of the dominant forearm using a hand dynamometer. Muscle performance was assessed with the 60 second sit-to-stand test (STS60) and with 5 times sit-to-stand test (STS5). Body composition was assessed with octapolar multifrequency bioelectrical impedance analysis (InBody 770). The level of physical activity was measured by the IPAQ questionnaire. BASDAI and BASFI were used to evaluated disease activity and function, respectively. All measures (except age and disease duration) are reported as median and 25th and 75th percentiles. Non-parametric tests were used to compare groups.
Results: A total of 27 patients and 27 controls were included [mean age (36.5 ± SD 1.0), 66% males]. AxSpA patients had symptom duration of 7.0 ± SD 0.9 years, BASDAI 2.7 (1.4-3.6) and BASFI 0.9 (0.3-3.2). Compared to controls, axSpA patients had less MS in the dominant upper limb (DUL) (46.0 (37.5-70.6) vs 71.2 (54.1-83.4) kg, p=0.006) and worse performance on the STS60 test (48.0 (27.5-64.3) vs 63.0 (53.0-68.0) repetitions, p=0.010). These differences were maintained after normalization for lean mass (LM) (MS_DUL/LM_DUL and STS60/Total_LM). In addition, compared to controls, axSpA patients had higher body fat (BF) (19.8 (12.1-29.1) vs 15.7 (10.1-22.2) kg, p=0.041), torso fat (TF) (10.3 (6.3-15.9) vs 8.1 (5.1--11.1) kg, p=0.450) and visceral fat (VF) (87.3 (52.7--145.1) vs 65.4 (41.8-96.4) cm2, p=0.034). No differences were registered for weight, body mass index, total body water, extracellular water, fat free mass, LM and bone mineral content between groups. The level of physical activity, measured by the IPAQ questionnaire, was identical between patients and healthy controls (p=0.500).
Conclusion: Compared to healthy controls, young axSpA patients have a reduction in muscle strength and muscle performance with maintenance of muscle mass and levels of physical activity. These preliminary results underline the relevance of further investigations.

P123 - PROBING THE ROLE OF LNCRNAS IN THE CONTROL OF OSTEOCLASTOGENESIS IN RHEUMATOID ARTHRITIS PATIENTS

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Rheumatoid arthritis (RA) onset and progression is thought to be triggered by an array of environmental factors in genetically and epigenetically predisposed individuals. Among various factors, lncRNAs have been

implicated in RA aetiology. An altered expression of several lncRNAs has been pinpointed in critical cellular types in RA, such as peripheral mononuclear leukocytes and activated fibroblast-like synoviocytes. Importantly, lncRNAs have already been suggested to play a role in osteoclastogenesis and in osteoclast function under physiologic conditions. So far, no study has yet examined this issue in the context of RA. As such, we have here set to analyse the expression of lncRNAs previously suggested to be enrolled in osteoclastogenesis, namely Meg3, Neat1, DANCR and Gas5, in monocytes and osteoclasts from RA patients in comparison to those obtained from healthy blood donors.

For this purpose, mononuclear leukocytes were isolated by density gradient centrifugation from peripheral blood samples. From these, adherent monocytes were in vitro differentiated into osteoclasts. In these, lncRNA expression was further analysed by qRT-PCR. So far, our initial experimental data suggests that in adherent monocytes, the expression of all the chosen lncRNAs varies between controls and RA patients. In fact, we observe a tendency for an increased expression of Meg3 and NEAT1 and for a decreased expression of Gas5 and DANCR in the patients' monocytes in comparison to those of healthy blood donors. A more extensive collection of total RNA from monocytes and osteoclasts of controls and RA patients will allow us to finely dissect the expression of these lncRNAs in these cellular types and thus to identify cellular variations of lncRNAs expression with clinical relevance for RA.

P125 - DISCORDANCE BETWEEN PATIENT,S AND PHYSICIAN,S GLOBAL ASSESSMENT IN RHEUMATOID ARTHRITIS

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Background: The Patient's Global Assessment of Disease Activity (PtGA) and Physician's Global Assessment of Disease Activity (PhGA) are important measures in treat to target strategy in rheumatoid arthritis (RA), but often provide discordant results. (1,2) Both PtGA and PhGA are assessed as part of three commonly used measures of disease activity (Disease Activity Score (DAS-28), in Simplified Disease Activity Index (SDAI) and Clinical Disease Activity Index (CDAI)). (3)

Objective: To assess differences and determinants of PtGA and PhGA in RA patients under biologic treatment.

Methods: A cross-sectional study, including 60 patients with RA, diagnosed according to the ACR/EULAR criteria treated with biological therapy. Participants completed 36-Item Short Form Health Survey (SF-36), Health Assessment Questionnaire (HAQ) and visual analogue scale (VAS) for global disease severity and pain. The physician completed the VAS for global disease severity and evaluated the parameters of inflammatory activity (sedimentation rate (SR) and C-reactive protein (CRP), Activity Score (DAS28). SPSS was used for the statistical analysis, significance level was 2-sided p<0.050.

Results: Among the 60 patients included, 73.3% were female, with a mean age of 57.1 years old (SD=11.5) and mean disease duration of 18.1 years (SD=8.5). Clinical and laboratory characteristics of the patients are shown in Table I. Positive discordance (PtGA>PhGA, more than 25mm in VAS) was found in 51.7% of cases. PtGA (median: 41.5, IQR: 26.3) and PhGA (median: 5.0, IQR: 20) was significantly different (p<0.001).

PtGA correlated with pain VAS (P=0.795, p<0.001), swollen joints (P=0.311, p=0.016), painful joints (P=0.288, p=0.025), HAQ (P=0.570, p<0.001), and negatively correlated with SF-36 physical and mental health summary scales (P=-0.444, p<0.001 and P=-0.470, p<0.001, respectively). These variables, in linear multiple regression represented a R2=0.702. The main predictors of PtGA were pain VAS and HAQ. PhGA correlated with: pain VAS (P=0.372, p=0.003), swollen joints (P=0.834, p<0.001), painful joints (P=0.777, p<0.001), and negatively correlated with SF-36 physical and mental health summary scales (P= -0.337, p=0.009 and P=-0.273, p=0.025, respectively).Patients with elevation of CRP had bigger PhGA (p=0.014). In linear multiple regression, these variables, represented a R2=0.722. The main predictors of PhGA were swollen joints and CRP level.

Conclusions: In this study, we show the variability implied on global assessment of RA activity. On one hand, patient-reported outcomes are constrained to subjective experience of pain and function. On the other, physicians attend to more objective measures such as swollen joints and CRP.

To the best of our knowledge, we demonstrate a correlation of both PtGA and PhGA with SF-36 scales, a new data in the literature.

TABLE I. CLINICAL AND LABORATORY CHARACTERISTICS OF PATIENTS WITH RHEUMATOID ARTHRITIS

	Rheumatoid Arthritis
Age	57.1 (SD=11.5) years old
Gender	Male: 26.7% (16) Female: 73.3% (44)
Age at diagnosis	42.2 (SD=12.1) years old
Years of diagnosis	18.1 (SD=8.5)
Years between symptoms and diagnosis	Median: 1 (IQR:2.6) (min:0, max:25)
Erosive evolution	76.5% (46)
Extra-articular manifestations	26.7% (16)
Immunology	Rheumatoid factor and ACPA positive: 50.0% (30) Rheumatoid factor positive: 21.7% (13) ACPA positive: 8.3% (5) Seronegative rheumatoid arthritis: 20.0% (12)
Years between classic and biologic DMARD	5.0 (IQR:6.0)
Smoking	30.0% (18)
Biologic DMARD or synthetic DMARD	1 (IQR:1) Etanercept 21 (35.0%) Rituximab 9 (15.0%) Tocilizumab 8 (13.3%) Golimumab 7 (11.7%) Infliximab 5 (8.3%) Adalimumab 5 (8.3%) Certolizumab 2 (3.3%) Tofacitinib 2 (3.3%) Baracitinib 1 (1.7%)
Classic DMARD	Metotrexate: 42 (70%); Leflunomide: 13 (21.7%) Hidroxiloroquine: 4 (6.7%) Sulfassalazine: 2 (3.3%)
Scholarity	Illiterate / <4 years: 3.6% ≤ 9 years: 69.1% 9 to 12 years: 18.2% Higher education: 9.1%
Patient Global VAS	Median: 41.5 (IQR: 36.3)
Patient Pain VAS	Median: 35.5 (IQR: 39.0)
Physician Global VAS	Median: 5.0 (IQR:20.0)
Painful joints	Median: 0 (IQR:3)
Swollen joints	Median: 0 (IQR:3)
C-reactive protein (CRP)	Median: 0.43, (IQR: 0.90)
Sedimentation rate	Median: 17 (IQR: 27)
HAQ: Health Assessment Questionnaire	1.031 (SD=0.710)
DAS28: Disease Activity Score 4V	3.306 (SD=1.359)
DAS28: Disease Activity Score 3V	3.179 (SD=1.361)
DAS28: Disease Activity Score 4V CRP	2.874 (SD=1.300)
DAS28: Disease Activity Score 3V CRP	2.657 (*SD*=1.244)
Simple Disease Activity Index (SDAI)	Median: 6.87 (IQR: 8.84)
Clinical Disease Activity Index (CDAI)	Median: 6.35 (IQR: 8.60)
Short Form (36) Health Survey (SF36)	Physical functioning: 44.8 (SD=28.3) Physical role functioning: 40.4 (SD=42.2) Bodily pain: 46.5 (SD=24.7) General health perceptions: 37.8 (SD=18.1) Vitality: 49.6 (SD=15.5) Social role functioning: 67.8 (SD=25.9) Emotional role functioning: 48.9 (SD=44.5) Mental health: 61.8 (SD=21.8)

ACPA: anti-citrullinated protein antibodies; DMARD: disease-modifying antirheumatic drugs; VAS: Visual Analogue Scale;
SD: standard deviation; IQR: interquartile range.

P126 - OUTCOME OF TRANSITION OF CARE IN YOUNG ADULTS WITH JUVENILE ONSET CHRONIC RHEUMATIC DISEASES

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Background: The transition process from a paediatric to an adult medical environment may affect the compliance with the management plan. Paediatric care is family oriented and relies on significant parental involvement in decision making. On the contrary, adult care is patient-specific and requires autonomy and in-

dependent skills.

Objective: The aim of this study was to evaluate the transition of care at our centre, namely the adherence to clinical appointments, modification of disease activity and patient satisfaction.

Methods: All consecutive patients with juvenile onset of chronic rheumatic diseases followed in a young adult clinic were included. Disease activity was evaluated at the last appointment in the paediatric unit and up to 2 years after transition of care, according to validated scores for each rheumatic disease. Dropout was defined as not attending the clinic for 2 consecutive visits. Global assessment of patient satisfaction with the clinical appointments before and after transition of care was evaluated in a scale of 0 to 10. Variables were analysed as means, medians and frequencies as appropriate. Univariate analysis was performed applying the student t-test and Qui-square.

Results: We included 126 patients, of which 78 (61%) were female and 77 (61%) had juvenile idiopathic arthritis (JIA) (table I).. The mean age was 23.1±3.2 years and the mean disease duration was 12.7±5.3 years. During the transition of care, 92 patients were treated with conventional disease modifying antirheumatic drugs - DMARDs (73%) and 35 with biologic therapy (29%). We identified 69 patients (55%) who missed at least one clinical appointment. Dropout was verified in 11 patients (9%). This was associated with longer disease duration (15.9 vs 12.3 years, p=0.024). Worse clinical disease activity was found in 11 patients (9%): 5 patients with polyarticular JIA with arthritis flare (∅DAS28 2.14 ± 0.83); 4 patients with oligoarticular JIA with new onset uveitis and 2 patients with juvenile systemic lupus erythematosus with a SLEDAI increase from 5 to 16 points. Four patients (3%) abandoned DMARDs. We identified 17 patients (14%) who changed hospital during transition (6 coming from paediatric hospitals) and 58 (46%) patients followed in our paediatric rheumatology unit changed assistant physician after transition of care. There were no differences between these groups in terms of modification of disease activity or satisfaction with the transition process. Patients missing appointments or that drop out didn't differ from the others in any of the variables evaluated.

Regarding the patient satisfaction questionnaire, the paediatric rheumatology appointments had a median evaluation of 9 (7-10), adult rheumatology appointments of 8 (5-10) and the transition process had an evaluation of 8 (5-10). The majority of patients reported the longer appointment waiting time as the major negative aspect after transition.

TABLE I. DESCRIPTIVE ANALYSES OF DIAGNOSIS

Diagnosis	N (%)
JIA	77 (61.1)
Persistent oligoarthritis	22 (17.5)
Enthesitis related arthritis	22 (17.5)
Rheumatoid factor negative polyarthritis	11 (8.7)
Extended oligoarthritis	9 (7.1)
Systemic	6 (4.8)
Psoriatic arthritis	4 (3.2)
Rheumatoid factor positive polyarthritis	3 (2.4)
Systemic lupus erythematosus	14 (11.1)
Vasculitis	9 (7.1)
Autoinflammatory syndrome	5 (4)
Dermatomyositis	3 (2.4)
Other diagnosis*	19 (15.1)

*Mixed connective tissue disease, Systemic sclerosis, Overlap syndrome, Osteoporosis, Osteogenesis Imperfecta, Spondyloarthritis

Conclusion: In our centre the transition of care had a small percentage of dropping out from the clinic, which was associated with longer disease duration, a slight worsening of disease activity and a 10% decrease in patient satisfaction.

P127 - DEMYELINATING DISEASES IN RHEUMATIC PATIENTS TREATED WITH TUMOR NECROSIS FACTOR INHIBITORS

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Background: Some authors reported an association between demyelinating diseases (DD) and tumor necrosis factor inhibitors (TNFi) treatment (1, 2), but a definite cause-effect relationship is not established yet. Current guidelines recommend avoiding their use in patients previously diagnosed with DD.
Objective: To identify and characterize cases of DD in rheumatic patients under TNFi treatment.
Methods: We conducted a prospective multicentric study including patients with Rheumatoid Arthritis (RA), Spondyloarthritis (SpA), Psoriatic Arthritis (PsA) and Juvenile Idiopathic Arthritis (JIA), registered at the Rheumatic Diseases Portuguese Register (Reuma.pt) between 2000 and 2018, who have been diagnosed with DD during treatment with a TNFi. The following data were collected: demographic and clinical data, specifying subtype of DD, disease activity at the time of DD diagnosis, previous therapy, TNFi used, treatment duration, maintenance on biological treatment, and the outcomes of the DD and of the baseline rheumatic disease.
Results: Among 10.447 patients under TNFi therapy, 9 cases of DD were identified. Of these, 6 were women. Underlying rheumatic diseases were SpA (n=4), RA (n=3), PsA (n=1) and JIA (n=1). Four patients were treated with adalimumab, 2 with etanercept, 2 with golimumab and 1 with infliximab. Four patients were also under a conventional synthetic DMARD (csDMARD). Two patients had previously received another TNFi, without record of any neurological symptom. The median duration of TNFi treatment before development of DD was 24 months (95% CI 2-84). Central nervous system involvement was reported in 7 patients: 4 with multiple sclerosis, 2 with optic neuritis and 1 with demyelinating encephalic lesions, without specification. Peripheral involvement was reported in 2 patients: 1 with Guillain-Barré syndrome and 1 with chronic inflammatory demyelinating polyneuropathy. At the onset of the DD, 5 of the 9 patients presented low disease activity or were in remission. All patients discontinued TNFi. One patient, with optic neuritis, restarted treatment with TNFi, with new onset of neurological symptoms, leading to consequent discontinuation. Six patients required treatment with steroids, intravenous immunoglobulin or others (glatiramer acetate, dimethyl fumarate). Four patients had complete resolution within one year, 2 patients improved with residual damage and 3 patients persisted with active neurologic disease. Currently, 1 patient is being treated with rituximab, 4 with csDMARDs and 4 with anti-inflammatory drugs and only 2 have persistent activity of the baseline rheumatic condition.
Conclusion: Development of DD under TNFi therapy is rare, but potentially severe. To our knowledge, this is the first study to focus on DD in Portuguese patients treated with TNFi. Despite the small number of reported cases, it raises awareness for the potential neurological adverse effects of TNFi.

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P131 - DOENÇA ÓSSEA DE PAGET – ANÁLISE DESCRITIVA DA POPULAÇÃO DE UM SERVIÇO DE REUMATOLOGIA

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Introdução: A Doença Óssea de Paget (DOP) é considerada um distúrbio osteometabólico de alto turnover, que resulta em sobrecrescimento ósseo que pode afectar uma determinada estrutura óssea (forma monostótica) ou múltiplas (forma poliostótica). A incidência da DOP varia entre 0,7 a 5% da população de acordo com a distribuição geográfica da população em estudo, fixando-se em 3% na maioria dos estudos. O seu diagnóstico é raro antes dos 50 anos, com incidência particular no sexo masculino na maioria das séries de casos.

Evidência recente sugere um papel genético na etiopatogenia, com cerca de 15 a 30% dos doentes a exibirem um padrão de hereditariedade autossómico dominante com penetrância incompleta, o que dificulta a apuração de antecedentes familiares.

Em muitos indivíduos a DOP é diagnosticada incidentalmente no momento da identificação de níveis persistentemente elevados de fosfatase alcalina (FA) em análises de rotina, ou quando achados radiográficos característicos (lesões osteolíticas em fases iniciais da doença ou hipercaptação em cintigrafia óssea) são observados em exames de imagem requeridos por outros motivos. A sua natureza incidental está associada à ausência de sintomas verificada em cerca de 20 a 25% dos

doentes.

As manifestações clínicas mais frequentes são a dor associada a deformidade óssea e fraturas patológicas, estando intimamente relacionadas com a topologia e número de lesões.

O objetivo deste estudo é efetuar uma analise descritiva de uma população de doentes com DOP seguidos num Serviço de Reumatologia nacional.

Métodos: Foram identificados todos os doentes seguidos no Serviço de Reumatologia tendo por base registos clínicos. Os dados clínicos e demográficos dos 10 doentes com o diagnóstico de DOP foram recolhidos e o consentimento informado foi obtido, assim como parecer ético favorável à sua análise e publicação.

Resultados: Como população em estudo, verificou-se preponderância do género masculino (70%), com uma média de idades ao diagnóstico de 59,4 (±11,5) anos. À altura do diagnóstico, 3 doentes apresentavam apenas queixas álgicas, 2 doentes apenas elevação assintomática de FA e 5 apresentavam ambos. A maioria dos doentes (90%) apresentou atingimento poliostótico, com um número médio de estruturas afetadas ao diagnóstico de 4,2 (±3,9). As estruturas ósseas e osteoarticulares mais afetadas foram o osso coxal, articulação coxofemoral e fémur. 3 doentes apresentavam deformidade óssea ao diagnostico, nenhum deles com melhoria estrutural significativa à remissão da doença com terapêutica médica. Nenhum dos doentes referiu antecedentes familiares de DOP.

A maioria dos doentes efetuou tratamento com ácido zolendrónico em algum momento do seu seguimento, obtendo-se boa resposta clinica e analítica. 5 (50%) doentes tinham outra patologia reumatismal. À avaliação no final do período de seguimento, não se tinha verificado fraturas patológicas ou diagnóstico de neoplasia, nomeadamente óssea, em nenhum dos doentes em estudo.

Conclusões: A distribuição demográfica e características clinicas da população em estudo enquadram-se no descrito na literatura, servindo de evidência ao pico etário de incidência da DOP, no qual esta patologia deve ser enquadrada como diagnóstico diferencial de relevo num individuo com a apresentação clinica, analítica ou imagiológica supracitadas.

P133 - DAS 28 3V AND DAS 28 4V: THE ROLE OF SUBJECTIVE AND OBJECTIVE VARIABLES

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Background: Disease Activity Score in 28 Joints (DAS28) is a widely used composite score for the assessment of disease activity and used as a treatment response in rheumatoid arthritis (RA).

DAS28 3 variables (DAS28 3V) is calculated based on three variables: swollen (SJ) and tender joint (TJ) counts and C-reactive protein (CRP) or erythrocyte sedimentation rate (ESR). DAS28 4 variables (DAS28 4V) also includes patient global assessment (PGA).

PGA may be affected by some factors such as depression, anxiety and some chronic fatigue, therefore DAS28 4V can be overestimated in some patients.

Objectives: To compare the clinical characteristics of patients with DAS28 based on subjective variables (TJ, PGA) with those with DAS28 based on objective variables (SJ, CRP/ESR). Determine the percentage of patients in which PGA changed the level of disease activity measured by DAS28.

Methods: Ninety-five consecutive patients RA are included. Medical records were reviewed to retrieve the following data: gender, age, disease duration, rheumatoid factor (RF), anti-cyclic citrullinated peptide (anti-CCP) antibodies, CRP, ESR, TJs, SJs, DAS28 3V CRP/ESR, DAS28 4V CRP/ESR, PGA, Evaluator Global Asessment (EGA), Clinical Disease Activity Index(CDAI), and erosions. Patients were categorized into 2 groups: Group 1- patients with at least one swollen joint or elevated CRP/ESR and group 2 - patients without SJ and CRP/ESR values within the reference range.

Results: Fifty patients (52.6%) and 45 (47.4%) patients were in the 1 and 2 groups, respectively. Patients in the group 2 had lower mean values of DAS28 4V CRP (p=0.000), DAS28 4V ESR (p=0.000), EGA (p=0.003) and CDAI (p=0.003), but higher mean values of tender joints (p=0.006). PGA changed the level of disease activity measured by DAS28 in 16 of all patients (16.8%). There were no statistically significant differences between the two groups when other variables such as age, gender, disease duration, RF, anti-CCP and erosions were evaluated.

Conclusion: Rheumatoid arthritis composite score should be used cautiously, and physicians should pay attention to subjective variables, because this can affect patient classification and treatment plan.

Limitations of this study include the sample size and other factors that influence PGA such as fatigue, anxie-

ty and depression have not been evaluated.

P137 - PREGNANCY OUTCOMES IN ANTIPHOSPHOLIPID SYNDROME: 8 YEAR-EXPERIENCE FROM A MULTIDISCIPLINARY UNIT

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Background: Women with antiphospholipid syndrome (APS) are at increased risk of recurrent miscarriage, fetal death, placental insufficiency, preeclampsia and fetal growth restriction. Although conventional treatment improves fetal-maternal outcomes, there are still some unsuccessful pregnancies. A multidisciplinary approach with strict monitoring is essential in order to attain obstetrical success.

Objectives: To assess pregnancy outcomes in portuguese women with APS who were surveilled at a multidisciplinary unit.

Methods: Pregnant women fulfilling the Sydney classification criteria for definite APS, who attended our specialized Rheumatology and Obstetrics outpatient clinic between 2010 and 2018, were included in this retrospective observational study. Cases of suspected APS not meeting the classification criteria were excluded. All pregnancies were followed by a multidisciplinary team (rheumatologists, obstetricians and nurses). Data was collected from medical records. Adverse Pregnancy Outcomes (APO) were defined as: spontaneous abortion (<10w), fetal death (≥10w), neonatal death, fetal growth restriction (FGR) and delivery prior to 36 weeks of gestation with or without preeclampsia (PE).

Results: A total of 35 pregnancies were identified in 25 women with APS. Twelve (48%) patients had thrombotic APS, 9 (36%) had obstetric APS and 4 (16%) had mixed APS. Primary APS was seen in 56% of patients, while systemic lupus erythematosus was found in 44%. The average maternal age at conception was 32.8 ± 5.2 years. Mean duration of disease prior to pregnancy was 6.4 ± 5.5 years. In regard to antiphospholipid antibody (APL) profile, 28.6%, 25.7% and 28.6% of patients were triple, double and single positive, respectively. Although they had fulfilled laboratorial criteria in the past, 17% of patients were negative for all APL. All patients were instructed to receive prophylactic or therapeutic low-molecular-weight heparin combined with low dose aspirin for the duration of pregnancy.

Regarding fetal outcomes, there were 2 (5.7%) cases of first-trimester miscarriage, 1 (2.9%) medical abortion due to exposure to teratogenic drugs at the time of conception and 4 (11.4%) fetal deaths. Among the cases of fetal death, one concerned a patient who suspended heparin on her own initiative and another one who became pregnant under warfarin and whose fetus had trisomy 18. The other cases occurred at 11 and 18 weeks of gestation, under regular therapy. There were no cases of neonatal death or other fetal malformations. The rate of live births was 80%, with a mean gestational age of 37.3 ± 1.5 weeks and average birth weight of 2796.4 ± 462 g. Most women delivered by cesarean section (54.3% of cases). There were 6 (17.1%) cases of preterm birth, three (8.6%) corresponding to fetus with FGR. Concerning maternal outcomes, there was

TABLE I. CLINICAL AND SEROLOGICAL FEATURES OF ADVERSE PREGNANCY OUTCOMES AND SUCCESSFUL PREGNANCIES

	APO, n=11 (32.4%)	Successful pregnancies n= 23 (67.6%)	*p*-value †	OR (CI 95%)
Maternal age, mean	32.3 ± 5.8	33.2 ± 4.2	0.244 ‡	-
Disease duration, mean	7.7 ± 6.6	5.8 ± 5.0	0.358 ‡	-
History of thrombosis	9 (81.8%)	14 (60.9%)	0.271	-
History of previous APOs	7 (63.6%)	12 (52.2%)	0.715	-
Concomitant SLE	8 (72.7%)	11 (47.8%)	0.270	-
Lupus anticoagulant	11 (100%)	11 (47.8%)	**0.003**	25 (1.32 – 474.08)
IgG aCL	6 (54.5%)	8 (34.8%)	0.458	-
IgM aCL	0 (0%)	5 (21.7%)	0.150	-
IgG anti-B2GPI	7 (63.6%)	8 (34.8%)	0.151	-
IgM anti-β2GPI	2 (18.2%)	4 (17.4%)	0.999	-
Single Positivity	2 (18.2%)	7 (30.4%)	0.682	-
Double Positivity	3 (27.3%)	6 (26.1%)	0.999	-
Triple Positivity	6 (54.5%)	4 (17.4%)	**0.045**	5.7 (1.15 – 28.33)
Negative APL	0 (0%)	6 (26.1%)	0.145	-
Low complement levels *	4 (50%)	5 (23.8%)	0.209	-
Anti-dsDNA ϕ	3 (37.5%)	2 (18.2%)	0.603	

The only patient who had a medical abortion was excluded from this analysis.
† Fisher's exact test, except otherwise indicated.
‡ Independent t-test.
*Data available for 29 pregnancies.
ϕ Applied only to patients with SLE (n=19).

one single case (2.9%) of PE. There were no cases of eclampsia or HELLP syndrome.

Lupus anticoagulant (p= 0.003, OR 25, CI 95% 1.32 – 474.0) and triple APL (p= 0.045, OR 5.7, CI 95% 1.15 – 28.33) positivity were associated with adverse pregnancy outcomes. In this cohort, no association was found between poor obstetric outcomes and history of thrombosis, presence of SLE or low complement levels (Table I).

Conclusions: In our study, most pregnancies were uneventful. Despite the small sample size, we reinforce the importance of a multidisciplinary evaluation and surveillance before, during and after pregnancy in women with APS in order to implement early treatment and to optimize fetal-maternal outcomes.

P140 - ESTABLISHED RHEUMATOID ARTHRITIS PATIENTS HAVE REDUCED FREQUENCIES OF FOLLICULAR CD8+CXCR5+ T CELLS IN PERIPHERAL BLOOD

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Introduction: Several studies have demonstrated that an immune dysregulation affecting both B and T cells occurs in rheumatoid arthritis (RA). Follicular helper T (Tfh) cells are crucial for B cell activation, class-switching and germinal center (GC) formation, whereas follicular regulatory T (Tfr) cells can specifically suppress Tfh and B cells to control the GC reaction. The immune homeostasis of Tfh and Tfr cells is reported to be disrupted in autoimmune diseases, but the knowledge in RA is still scarce.

Objectives: The main goal of this study was to analyze the frequency and the phenotype of follicular T cell subsets in circulation in established RA patients.

Methods: Blood samples were collected from established RA patients treated with methotrexate (n=10) and a group of age and sex-matched healthy donors (n=7). Peripheral blood mononuclear cells (PBMC) were isolated and the percentages and the phenotypic profile of Tfh (CD4+CXCR5+CD45RO+) cells and their three major subsets [CXCR3+CCR6- (Tfh1), CXCR3-CCR6- (Tfh2) and CXCR3-CCR6+ (Tfh17)]; Tfr (CD4+CXCR5+CD25+FoxP3+) cells, and follicular CD8+ T cells (CD8+CXCR5+) were evaluated by flow cytometry.

Results: The frequency of Tfh cells and their subsets (Tfh1, Thf2 and Tfh17) and Tfr cells in circulation was similar between established RA patients and controls. Furthermore, no significant differences were found in the percentages and median fluorescence intensity (MFI) values of PD-1, ICOS, CD28, CTLA-4, CD40-L and HLA-DR expressed by Tfh and Tfr cells in RA patients when compared to controls. Nonetheless, we found that established RA patients had significantly lower frequencies of CCR7+ Tfh cells, but higher percentages of CD69+ Tfr cells in comparison to controls. In addition, the circulating levels of CD8+CXCR5+ T cells were significantly decreased in established RA patients when compared to controls. No significant differences were observed in the frequencies of total CD3+, CD4+, CD8+ and regulatory T cells (CD4+ CD25highFOXP3+) in circulation between both groups.

Conclusions: Established RA patients have similar frequencies of Tfh and Tfr cells in circulation when compared to healthy controls, but a treatment effect cannot be excluded. The reduced circulating levels of CD8+CXCR5+ T cells observed in RA patients suggests a recruitment of this T cell subset to B cell follicles in the joints and/ or secondary lymphoid organs, where they can promote B cell differentiation and antibody production.

*RA Moura, JE Fonseca and LGraça are joint senior authors.

P141 - PAGET'S DISEASE-EXPERIENCE OF A TERTIARY CENTER

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Background: Paget's disease is a chronic progressive metabolic bone disorder that can affect one or multiple sites, but with a predilection for the axial skeleton. The majority of patients with Paget disease of bone are asymptomatic and the diagnosis is usually made incidentally. The prevalence of the disease in Portugal is

unknown.
Objectives: To report and describe the presentation and clinical characteristics of a rarely diagnosed rheumatic disease.
Methods: Retrospective study of patients with a diagnosis of Paget's disease with follow up in the rheumatology department in a tertiary center. The demographic data, clinical features, investigation results and treatment of the cases were analyzed from medical records.
Results: We identified 7 patients with Paget's disease of the bone (3 women and 4 men; mean diagnosis age 59.1±7.0 years). Four patients had bone pain at the affected site and three had unspecific arthralgias and presented as an incidental finding during the diagnostic investigation. All but one had raised serum alkaline phosphatase level with normal serum calcium levels. The majority of the patients (71.4%, n=5) had a monostotic disease and the most commonly involved site was the pelvis. All of them had hypercaption of the radiopharmaceutical agent at bone scintigraphy and alterations that were suggestive of pagetic bones at the radiographs. All of them were treated with bisphosphonates (intravenous pamidronate (n=2), oral alendronate (n= 3), oral risedronate (n=1), intravenous zoledronate (n=1)). The two patients treated with one administration of intravenous pamidronate were then treated with zoledronate or alendronate. After one year of treatment, the serum alkaline phosphatase levels have decreased in all patients. None of the patients had related complications (musculoskeletal, neurologic, and cardiovascular problems).
Conclusion: The patients included are mainly men with bone pain at the site involved. The majority was a monostotic disease. All of them were treated with bisphosphonates with good clinical results.

P148 - IS INTERNET AN IMPORTANT SOURCE OF INFORMATION FOR RHEUMATIC PATIENTS?

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Background: The internet offers diverse opportunities for rheumatic patients in the field of disease diagnosis and management in addition to providing a forum for debate on the disease. However, various skills are required to benefit from internet for one's own health, known as eHealth literacy. Nowadays, it is important to know if patients are using the internet and how they are researching information about their disease and management.
Aim: To examine patients' use of the internet to obtain medical information about their disease and how they rate the quality of that information.
Material and Methods: Consecutive rheumatic patients consulting the outpatient Rheumatology Department over 2 months, filled out an anonymous questionnaire. Apart from sociodemographic and clinical data, questionnaire addressed aspects such as information about their rheumatic disease and comorbidities, availability of computers and internet, research of medical issues on Internet and quality of information found.
Results: One hundred and thirteen questionnaires were collected. Seventy-nine patients (69.9%) were female. The most prevalent disease was rheumatoid arthritis (31.9%). For the entire group, median disease duration was 8.9 years ± 7.33. Ninety-one (80.5%) considered that their disease was stable. Eighty-nine patients (78.8%) had access to the internet and sixty-nine (61.1%) had searched for medical information in last year, mostly on health websites (68.5%). Patients searched information on the Internet, mainly because they wanted to know more about their rheumatic disease. In most cases, this information did not change the attitude of the patients towards the disease. Patients who searched for medical information were younger (47,7 years vs 56,9 years) (p=0.004), had a higher education level (p=0.000), were mostly married (p= 0.027) and had other comorbidities (p=0.03). There were no differences in sex distribution, occupation, diagnosis, disease duration and disease control.
Conclusion: The use of the Internet as a resource for health information is a reality and physicians should be aware of their specificity and guide patients in online research.

P149 - REMISSION AND LOW DISEASE ACTIVITY MATRIX TOOLS: RESULTS IN REAL-WORLD RHEUMATOID ARTHRITIS PATIENTS UNDER ANTI-TNFA THERAPY

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Background: Remission/low disease activity (LDA) are the main treatment goals in rheumatoid arthritis (RA) patients. Several independent predictors of RA remission had been described, namely: baseline clinical and laboratory characteristics and genetic markers. Vastesaeger N. et al published 2 tools that showed the ability to predict golimumab treatment outcomes in patients with RA. These matrices are based on a combination of 6 baseline characteristics (Gender, presence/absence of comorbidities, age, HAQ, ESR and TJC28) and may provide guidance for the selection of candidates for anti-TNF therapy.

Objectives: To estimate the real-world accuracy of two quantitative tools to predict RA remission and low disease activity.

Methods: Multicentric, retrospective, observational study, using data from the Rheumatic Diseases Portuguese Register (Reuma.pt), including biologic naïve RA patients under anti-TNF therapy as first line biologic with at least 6 months of treatment. The accuracy of these matrix tools was assessed by likelihood-ratio (LR), sensitivity (SN), specificity (SP), positive predictive value (PPV), negative predictive value (NPV) and area under the curve (AUC).

Results: 674 RA patients under anti-TNF therapy as first line biologic were included, from 12 centers (266 etanercept, 186 infliximab, 131 adalimumab, 85 golimumab, 6 certolizumab pegol). The median (min-max) age of our sample was 53.4 (18.4-82.3) years and the median disease duration (min-max) was 7.7 (0-42.5) years. The majority were female (72%). Most of them had RF and/or ACPA positivity (75.5%) and erosive disease (54.9%); 58.6% had comorbidities. At baseline, median (min-max) disease actity related values were: ESR 31 (1-120) mmh, C-RP 1.14 mg/dL (0.01-46.4), SJC28 7 (0-28), TJC28 10 (0-28) and PGA 62 (0-100). The median DAS28 ESR was 5.57 (1.13-8.43) and the median HAQ was 1.5 (0-3). At 6-months, 157 (23.3%) patients achieved remission (DAS28 ESR ≤ 2.6) and 96 (14.2%) LDA (DAS28 ESR > 2.6 and ≤ 3.2). Accuracy of the equation, schematically repre-

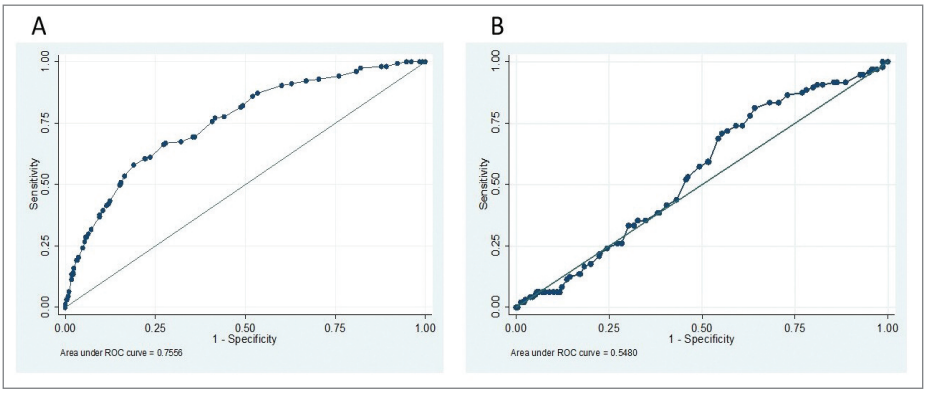

FIGURE 1. ROC Curves for Remission (A) and LDA (B)

sented by matrix tools, to predict remission and LDA was measured with ROC curves. Area under the curve for remission in this real world sample was 0.7556 [IC 95% (0.7127-0.7985)] and for LDA was 0.5480 [IC 95% (0.4915 -0.6046)]. SN, SP and LR vary depending on cut-offs applied for percentages obtained by this equation model. The highest, LR (8.23) for remission state was obtained at a cut-off ≥ 67%, with high SP (99.6%) but low SN (3.2%). A better balance of SN and SP (65.6% and 73.9%, respectively) was observed for a cut-off >30%, with a LR of 2.51, PPV of 43.3% and NPV of 87.6%.

Conclusion: The accuracy of the tool for prediction of LDA states is not as good as for remission. Still, our results corroborate the idea that these matrix tools could be helpful to select patients for anti-TNF therapy.

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P150 - MUSCLE STRENGTH COMPROMISE IN YOUNG AXIAL SPONDYLOARTHRITIS PATIENTS: PRELIMINARY RESULTS FROM MYOSPA STUDY

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Introduction: Pain and stiffness are characteristic clinical features of axial Spondyloarthritis (axSpA), leading to functional impairment. Patients describe beneficial effects of physical activity, suggesting a possible involvement of muscle tissue. Body composition data in young axSpA patients with short disease duration are scarce and its implications in muscle strength are not yet clarified.

Objectives: The purpose of this study is to assess the muscle strength and body composition of different body segments (trunk, upper and lower limbs), in patients with axSpA and to compare them with healthy controls.

Methods: Patients with clinical diagnosis of axSpA meeting the ASAS classification criteria, aged 18 to 50 years, with symptoms duration ≤ 10 years, were included in this study. Healthy individuals matched by gender and age (1:1) were used as control group (HC). Muscle strength was measured by resisted hand-held dynamometer performed by a single reader, in three different body segments: trunk, upper and lower limbs (on both sides). The mean strength of right and left, upper and lower limbs, was calculated and used in the analysis. Strength of each body segment was also normalized to the total lean mass (LM) of the respective segment. Body composition was measured by octapolar multifrequency bioelectrical impedance analysis (InBody770). Physical activity was assessed by the International Physical Activity Questionnaire (IPAQ). Fisher's exact test or chi-square test and Mann-Whitney U test were used to compare differences between groups.

Results: A total of 27 axSpA patients and 27 HC were included. Mean age was 36.5 ± 1.0 years, 67% were males. There was no significant difference between both groups in terms of age, gender, body mass index and physical activity. AxSpA patients had a mean symptoms duration of 7.0 ± 0.9 years.

AxSpA patients had lower muscle strength in the upper limbs (50.55 ± 31.60 vs 71.70±31.41 p=0.023) and lower limbs (52.25±18.45 vs 59.83±9.75, p=0.001), compared to HC. Trunk muscle strength did not show any difference between groups (59.10±26.1 vs 56.45±11.2, p=0.856).

There were no significant differences in LM and body water, between both groups, for each segment (upper limbs, lower limbs and trunk). Fat mass was significantly higher in the trunk (10.90±8.80 vs 8.10±5.83, p=0.035) and upper limbs (1.40±1.35 vs 0.88±1.0, p=0.05) of axSpA patients, but not in the lower limbs (3.10±1.90 vs 2.45±1.68, p=0.157).

Normalized appendicular muscle strength was lower in axSpA patients (upper limbs: 18.63±8.25 vs 21.21±5.92, p=0.018) (Table).

Conclusion: Young patients with short disease dura-

tion have reduced appendicular muscle strength, compared to HC, with no differences in LM, suggesting a possible muscle dysfunction. Further studies are needed to confirm these findings and understand the underlying pathophysiological mechanisms.

P151 - IMPACT OF PGA IN RA PATIENTS MEDICATED WITH CSDMARDS AND BDMARDS

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Background: The advent of biologic agents changed the treatment paradigm in Rheumatoid Arthritis (RA). These agents are highly effective and significantly improve disease activity measured by objective variables like swollen joints (SJ), erythrocyte sedimentation rate (ESR) and CRP (C-reactive protein). However, patient global assessment (PGA) is not always improved in a parallel way. Physicians and patients have different ways to evaluate the benefits of a treatment intervention and this can explain the discordance between PGA and disease activity.

Aim: To analyse the impact of PGA addition to DAS28

TABLE I. COMPARISON OF SUBJECTS CHARACTERISTICS BETWEEN AXSPA PATIENTS AND HEALTHY CONTROLS

Variable	Patients *n*=27	Controls *n*=27	*p*-value
Age*	36.25±7.82	36.81±7.36	0.808
Gender (male), *n* (%)	18 (66.7%)	18 (66.7%)	1.000
Body height (cm)	169.80±10.7	172.40±13.3	0.522
Body mass (Kg)	73.00±19.2	70.050±16.5	0.347
BMI (Kg/m2)	25.10±7.00	23.80±3.00	0.303
IPAQ (%)			0.871
Low	10.4	14.6	
Moderate	20.8	18.8	
High	18.8	16.7	
BASDAI	3.0±2.11	-	-
BASFI	0.90±4	-	-
Strength (Nm/s)			
Trunk	59.10±26.1	56.45±11.2	0.856
Upper Limb	50.55±31.60	71.70±31.41	**0.023**
Lower Limb	52.25±18.45	59.82±9.75	**0.001**
Lean Mass (Kg)			
Trunk	24.90±4.40	25.25±8.35	0.831
Upper Limb	3.00±0.76	3.12±1.40	0.782
Lower Limb	7.96±2.38	9.17±3.07	0.128
Fat Mass (Kg)			
Trunk	10.90±8.80	8.10±5.83	**0.035**
Upper Limb	1.40±1.35	0.88±1.05	**0.050**
Lower Limb	3.10±1.90	2.45±1.68	0.157
Body water (L)			
Trunk	10.40±3.40	19.30±5.98	0.837
Upper Limb	2.34±0.59	2.40±0.96	0.885
Lower Limb	6.13±1.84	6.93±2.33	0.274
Strength/LM (Nm/s/Kg)			
Trunk	2.40±0.60	2.34±0.58	0.628
Upper Limb	18.63±8.25	21.21±5.92	**0.018**
Lower Limb	6.47±1.71	6.80±2.03	0.233

Values are median ± IQR, unless otherwise indicated.
* Mean ± SD.
BMI: Body Mass Index. IPAQ: International Physical Activity Questionnaire. BASDAI: Bath AS Activity Index. BASFI: Bath AS Functional Index. LM: Lean Mass.

score in RA patients, treated with DMARDs and biologics

Material and **Methods:** Consecutive patient's RA followed in Rheumatology department were enrolled. Sociodemographic and clinical data were collected. Patients were divided into 2 groups according RA treatment: first, those patients treated with convencional syntetic disease-modifying antirheumatic drugs (csDMARDs) – csDMARDs group and, second, patients treated with biologic disease-modifying antirheumatic drugs (bDMARDs) – bDMARDs group.

Results: One hundred and twenty-seven patients were included, 78.7% were female, mean age was 57.9±12.7 years and the median disease duration was 13.4 ± 11.4 years. The majority of patients had Rheumatoid Factor and anti-cyclic citrullinated peptide (anti-CCP) antibodies positives (63.3% and 59.8%, respectively). Erosions were presented in 42 (34.1%) patients. Seventy-five (38%) patients were in csDMARDs group and 46 (62%) in bDMARD group. The mean DAS28 3V CRP was 2.3±1.0 versus 2.7±1.1 for DAS28 4V CRP (p=0.000). The difference between DAS28 3V score and DAS28 4V are higher in patients treated with bDMARDs than patients treated with csDMARDs (p=0.003).

Conclusion: The impact of PGA addition to DAS28 score in RA patients was higher in patients with biologic treatment than patients with DMARDs. The addition of a biological treatment can lead to clinical improvement but not reflect a change in the patient's perception of his illness.

Further studies examining specific aspects such as anxiety, depression, fatigue and treatment-related adverse events should be address to make conclusions about the importance of PGA in daily practice.

P175 - SELF-REPORTED IMPACT OF AXIAL SPONDYLOARTHRITIS ON WORK

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Background: Axial Spondyloarthritis (axSpA) is associated with a considerable burden in terms of restrictions in activities of daily living, reduction in health-related quality of life and in work productivity. Also, paid work is very important for AS patients since it increases self-esteem and financial independence. Difficulties on carrying out their job because of the disease, limitations in their career perspective or even levels of discrimination should be evaluated in these patients.

Objective: The aim was to establish how patients experience the impact of axSpA on work disability and working life.

Methods: Patients fulfilling the Assessment of Spa International Society Classification (ASAS) criteria for axSpA under working age (18-67 years), followed at Rheumatology department of Hospital de Egas Moniz were included in this observational study. Demographic data, participants' profession, experiences and perceptions of the impact of the disease in their work were recorded through a telephone call. Verbal consent of the participant was registered, and anonymity was respected.

Results: Respondents (n=60;62% men) with an average age of 44 ± 11 years [min-max 22-66 years], educated (68% had done high school or more), working full-time (63%), part-time (10%), retired (17%, 7/10 due to illness) and 10% unemployed (for reasons linked to the disease or for other reasons, students or housewives). The majority (68%) were married or lived together. Disease duration was 16 ± 10.1 years with an average delay of 8.5 years to a definitive diagnosis.

For those who went to work sick (95%), various reasons were mentioned: economic issues were mentioned in 63% of the cases, not liking staying at home in 46%, importance of work in 37%, respect for colleagues in 27%, feeling of continuing to "be normal" and productive in 25%. Less frequently the pressure at work (11%), the respect for their coordinators and chiefs (11%) and the difficulty in returning to work after a sick leave (4%) were mentioned. Two patients, a teacher and a nurse, reported as the main cause the respect for the students and the patients, respectively.

In an analysis according to the type of profession, the economic issues remained the most chosen justification (71% for patients with physically demanding professions vs 58% for less physically demanding jobs). However, among patients with less physically demanding jobs, 53% stated that they do not like to stay at home even though they are ill as the second cause. This percentage decreased to only 33% when considering patients with physically demanding professions, being the respect for the colleagues (to whom more

work is assigned) the second chosen cause (38%).

Regarding career progression or development of new projects, 67% considered that the impact of the disease can limit it; 58% recognized that had already canceled or postponed work and 21% had already changed jobs because of the disease. Feeling of discrimination by colleagues and/or chiefs was reported by 16% of patients.
Discussion/Conclusions: Almost all patients already went to work sick and have experienced difficulties in carrying out their job because of the disease. This study suggests that individuals with axSpA wish to work because of the commitment to their employment, considering it as a "second home", particularly in patients with less physically demanding jobs. Impact on career progression and stability was seen. Levels of discrimination and need for job change were similar to those described in other studies.

P187 - ASSESSMENT OF DIGITS' CIRCUMFERENCE IN THE PORTUGUESE POPULATION TO CALCULATE THE LEEDS DACTYLITIS INDEX

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Background: Dactylitis is a hallmark manifestation of psoriatic arthritis (PsA). The Leeds Dactylitis Index (LDI) is an objective measure for assessing dactylitis activity in PsA patients that uses standard digits' circumferences in cases of bilateral dactylitis. These data are available for the United Kingdom population but have not been studied in the Portuguese population.
Objective: The objective of this study is to estimate the digit circumference of the Portuguese population for female and male subjects, to calculate the LDI.
Methods: The circumference of the 10 digits of the hands and the 10 digits of the feet, was assessed using a dactylometer in healthy individuals. Demographic data concerning age, gender, weight, height and previous or concomitant diseases were collected and registered. Digits circumference was studied according to gender and body mass index (BMI). BMI categories were considered as follows: underweight = <18.5; normal weight = 18.5–24.9, overweight = 25–29.9 and obesity = BMI of 30 or greater.
Results: Fifty-one Portuguese participants (29 women, 22 men) with a mean age of 42±9.8 (min 20, max 61) years and a mean BMI of 24.3±3.2 (min 17.4, max 31.5) were included.

The mean circumference of the men's digits was higher than in women. The lowest digits' circumference was found in an underweight individual (N=1) and the highest in the overweight group (N=19). However, the samples of underweight and obese groups were very small to assess differences (1 and 3 individuals respectively). The variation of circumference of the middle, fourth and fifth fingers of the feet between the normal, overweight and obesity groups was small. Comparing to the reference tables from the United Kingdom, the mean digital circumference of our population was numerically higher, with exception of the men's thumb, great toe and fifth fingers, which may reflect constitutional differences between the two populations or the relatively small sample size of both studies.
Conclusions: Anthropometric and demographic factors can potentially influence the digits circumference and should be taken in account for LDI assessment across countries.

TABLE I. DESCRIPTION OF HANDS AND FEET DIGITS' CIRCUMFERENCE, ACCORDING TO GENDER AND BODY MASS INDEX (IN MILLIMETERS)

		Total	Gender		Body Mass Index			
			Females	Males	Underweight	Normal weight	Overweight	Obesity
Number of individuals		51	29	22	1	28	19	3
Fingers Mean±SD	Thumb	64.2±5.9	61.2±4.7	68.1±4.9	54.5	61.8±4.6	67.6±5.7	68.0±5.3
	Index	64.1±5.8	61.3±4.9	67.7±4.0	54	61.6±4.6	67.7±5.6	67.2±3.2
	Middle	61.5±5.6	58.6±4.5	65.2±4.6	51	59.2±4.4	64.9±5.1	64.0±5.8
	Ring	57.8±5.2	55.3±4.0	61.1±4.7	49.5	55.8±4.1	60.9±5.0	59.3±4.8
	Little	54.4±5.5	51.6±4.3	58.2±4.6	45	52.0±4.5	58.0±4.6	57.3±5.5
Toes Mean±SD	Great Toe	77.3±6.1	73.9±4.7	81.8±4.6	66.5	75.0±5.6	80.7±4.9	80.8±4.1
	Second	53.2±4.2	51.2±3.3	55.9±4.7	46	51.6±3.7	55.9±3.7	54.0±0.9
	Middle	51.0±3.8	49.4±3.2	53.1±3.6	44	49.9±3.5	53.1±3.3	50.5±3.9
	Fourth	49.4±4.0	48.2±4.0	50.9±3.6	46	48.5±3.9	50.9±3.8	49.2±5.0
	Fifth	49.7±3.8	48.5±3.5	51.2±3.8	45	48.6±3.8	51.4±3.4	50.5±3.5

P190 - CONSULTA MULTIDISCIPLINAR DE PATOLOGIA DO INTERSTÍCIO PULMONAR - CASUÍSTICA

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Introdução: As doenças do interstício pulmonar são um grupo muito extenso de doenças que têm em comum a inflamação do interstício e alvéolos pulmonares. São doenças pouco frequentes, e na sua maioria, a causa é desconhecida. Nos restantes casos pode ser provocada pela inalação de produtos orgânicos ou inorgânicos, radioterapia ou por doenças sistémicas com envolvimento pulmonar (artrite reumatóide ou esclerose sistémica). As queixas mais frequentes são o cansaço, tosse seca ou dispneia de esforço.

Métodos: A consulta multidisciplinar da patologia do Interstício foi criada em Setembro de 2018, pelo que recolhemos todos os casos de doentes discutidos nestas reuniões até Janeiro 2019.

Resultados: Foram discutidos 12 pacientes nesta consulta, sendo que 1 dos pacientes foi discutido mais do que uma vez. Cerca de 58% (7) dos pacientes são do sexo masculino e 42% (5) do sexo feminino, com uma média de idades de 63.4 anos (± 6.98). 42% (5) dos pacientes refere exposição a penas/ pássaros, 8% (1) com exposição a pó de pedra e 50% (6) sem exposição de risco. Aproximadamente 33% (4) dos pacientes fumam ou são ex-fumadores. Cerca de 50% (6) dos pacientes apresentavam queixas de dispneia de esforço e 25% (3) apresentava tosse. A nível dos sintomas reumatológicos, 50% (6) com queixas de artralgias, 16% (2) com síndrome de raynaud e 25% (3) sem sintomas articulares. Aproximadamente 42% (5) dos doentes apresentavam artrite.

A nível dos diagnósticos estabelecidos pela reumatologia, 42% (5) ainda em avaliação (sem diagnóstico definitivo), 25% (3) com artrite reumatóide e 25% (3) com esclerose sistémica (sendo que um dos doentes apresenta esclerose sistémica e AR sobrepostas), 8% (1) com artrite psoriática e 8% (1) com DMTC. Ao nível dos diagnósticos estabelecidos pela pneumologia, 50% (6) dos pacientes discutidos não apresentavam patologia do interstício, 8% (1) silicose, 8% (1) esclerose sistémica com atingimento pulmonar, 8% (1) padrão intersticial não especifico, 8% (1) pneumonite de hipersensibilidade, 8% (1) fibrose pulmonar idiopática e 8% (1) pneumonia idiopática com características autoimunes.

Com a colaboração da imagiologia foram discutidos casos apresentados quer pela Pneumologia, quer pela Reumatologia, com posterior orientação para a outra especialidade sempre que se justificasse.

Conclusão: Consideramos esta consulta uma mais-valia na nossa prática clínica, uma vez que esta abordagem multidisciplinar permite melhorar a qualidade do diagnóstico, adequar o tratamento e a qualidade de vida do paciente.

P191 - INTERDISCIPLINARY STRATIFIED CARE FOR LOW BACK PAIN – A QUALITATIVE STUDY OF GENERAL PRACTITIONERS' AND PHYSIOTHERAPISTS' PERCEPTIONS REGARDING ITS UPCOMING IMPLEMENTATION IN PORTUGAL

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Introduction: Low back pain (LBP) is the most prevalent rheumatic and musculoskeletal condition in Portugal. The results of a recent study have suggested that the current clinical practice is not in line with clinical guideline recommendations and may not be delivering the best outcomes to LBP Portuguese patients. Since the stratified primary care approach has demonstrated clinical and cost-effectiveness in the UK and other countries, the SPLIT project aimed to introduce a similar approach that involves General Practitioners (GPs) and Physiotherapists (PTs) in the triage and targeted treatment for LBP patients, in Portugal. In order to facilitate the implementation of this project a training program for GPs and PTs was delivered by Portuguese Rheumatologists and PTs. Considering the specific organization of the Portuguese NHS, particularly the primary care context, it was important to explore the perceptions of the GPs and PTs, who had attended to the training, regarding the upcoming implementation of the SPLIT stratified model of care.

Purpose/Aim: To explore Portuguese GPs' and PTs' perceptions regarding the SPLIT model. In particular, this study aimed to identify and understand the acceptability of this model as well as the potential barriers and facilitators to its implementation.

Materials and Methods: After obtaining ethical approval, one focus group for each professional group was carried out. The two focus groups were based on a semi-structured interview schedule, audio-recorded and transcribed verbatim. A thematic analysis was conducted. Firstly, two researchers independently coded the transcripts. Secondly, these researchers discussed the codes and examined their scope and relevance. Thirdly, the researchers developed a coding scheme that included the main themes and sub-themes, as well as the connections among them.

Results: A total of 12 participants were included. The GPs' group included 6 participants (4 female, 2 male; 38.7±12.06 years), with an average of 13.17 years of professional experience, from which 10.17 years were based in primary care. The PTs' group included 6 participants (5 female, 1 male; 42.83±6.36 years), with an average of 21 years of professional experience, from which 13.87 years were based in primary care. Four themes emerged from data analysis. In the first theme, the participants explored the aspects related to the acceptability of the SPLIT model, such as the satisfactory amount of effort that is expected to be required for its implementation. In the second theme, the potential facilitators to the implementation of the model were identified, such as the participants' personal motivation. In the third theme, the potential barriers were explored, with particular emphasis on the challenges related to the change of routine care. Lastly, the participants explored the importance of introducing specific adjustments in their services, such as the participation of PTs in GPs' meetings, in order to contribute to the successful implementation of the model.

Conclusion: This study has offered the first insights into the perceptions of GPs and PTs regarding the acceptability of the SPLIT model, as well as potential facilitators and barriers to its implementation. This knowledge may contribute to the successful implementation of stratified care for LBP patients in Portugal.

P195 - PREDICTIVE VALIDITY OF THE START BACK SCREENING TOOL (SBT) TO IDENTIFY PATIENTS AT RISK OF DEVELOPING PERSISTING DISABLING LOW BACK PAIN

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Background: Recent international guidelines recommend the use of stratified care for patients with low back pain (LBP) to optimize treatment benefits, reduce

harms and maximize healthcare efficiency. Stratified care approaches aim to match patients to the most appropriate care pathways on the basis of an early and accurate patient screening. The Start Back Screening Tool (SBT) is a prognostic screening tool that assesses characteristics of an individual's pain experience and psychosocial factors associated with persistent disabling back pain. Based on established cut-off points the patients are classified to one of three risk categories: low, medium and high risk of developing persistent disabling back pain. The SBT was recently cross- culturally validated into European Portuguese but its predictive validity is unknown.

Purpose/ Aim: The aim of this study was to determine how well SBT-PT discriminate between patients who develop short-term poor outcomes and those who do not in LBP patients treated in a primary care setting.

Methods: A cohort of 116 patients with nonspecific LBP was recruited from the 7 different primary care units according to standardized inclusion and exclusion criteria. Participants were screened at baseline with SBT-PT, and then evaluated 2 months later on disability [Roland Morris Disability Questionnaire (RMDQ)], pain [Numeric Pain Rating Scale (NPRS)] and health-related quality of life (HRQoL) [EuroQol five-dimension questionnaire (EQ-5D,3L)], respectively. The Kruskal-Wallis test was used to assess differences between the SBT risk groups on disability, pain and HRQoL, at the follow-up. Based on previous research studies, participants were classified as having a poor outcome if they report RMDQ ≥ 7, NPRS≥ 3, and EQ-5D<0.6, at 2 months follow-up. Logistic regression analyses were performed with poor outcome status as the dependent variable and adjusted for age, gender, educational level, pain duration and intensity, and functional status. Predictive validity was assessed using area under the curve (AUC) statistic, generated by receiver operating characteristic (ROC) curve analysis. Additionally, the ability of the SBT risk group cut-offs to predict poor outcomes was estimated using likelihood ratios.

Results: From the 110 that completed the follow-up 19 (17%), 59 (54%) and 32 (29%) patients were classified as low, medium and at high risk, respectively. At 2-month follow-up there were statistically significant differences in the distribution of disability, pain and HRQoL scores between the SBT low/medium and high-risk groups (p<0.001). Patients in the high-risk group had a significantly increased risk of having more disability (OR 5.77, 95% CI 1.42 to 23.55) and poor HRQoL (OR 15.15, 95% CI 1.74 to 125.0) vs the low/medium risk group at follow-up. The ability of the SBT-PT total scores (0–9 points) to discriminate between individuals with poor/good outcomes was 0.76 (95% CI 0.67 to 0.85) for disability, 0.62 (95% CI 0.52 to 0.73) for pain, and 0.65 (95% CI 0.54 to 0.76) for HRQoL. Estimated likelihood ratios of risk group cut-offs were higher for disability and HRQoL than for pain but the values observed revealed limited ability to predictive future poor outcomes.

Conclusions: The SBT-PT seems to be an appropriate tool for identifying LBP patients at risk of poor disability outcome in a short-term period. SBT-PT ability for predicting pain and HRQoL outcomes is limited.

P204 - TWO-YEAR EFFICACY AND SAFETY OF IXEKIZUMAB IN PSORIATIC ARTHRITIS PATIENTS

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Introduction: Ixekizumab (IXE), a high-affinity monoclonal antibody selectively targeting IL-17A, was superior to placebo at Week 24 for treating signs and symptoms in patients with active psoriatic arthritis (PsA) and inadequate response/intolerance to TNF inhibitors (TNFi). We report SPIRIT-P2 results following 2 years of IXE treatment.

Materials and Methods: Adult patients (N=363) with PsA and inadequate response/intolerance to 1 or 2 TNFi were randomized (1:1:1) to 80-mg IXE every 4 weeks (IXEQ4W, N=122) or 2 weeks (IXEQ2W, N=123) following a 160-mg starting dose of IXE at Week 0, or placebo (N=118). Placebo patients were re-randomized (1:1, IXEQ2W or IXEQ4W) at Week 16 if inadequate responders (<20% improvement in tender joint count [TJC] and swollen joint count [SJC]) or Week 24. From Week 32, patients discontinued if ≥20% improvement in both TJC and SJC was not achieved. Ad-hoc efficacy analysis for the combined treatment periods from Week 0-108 included patients initially randomized to IXE. Safety analyses included patients receiving ≥1 dose of IXE.

Results: Overall, 54.2% randomized patients completed 108 weeks of treatment. At Week 108, patients receiving IXEQ2W or IXEQ4W had higher response

TABLE I. EFFICACY AND SAFETY OUTCOMES AT WEEK 108 OF SPIRIT-P2

Efficacy[a] (Intent-to-Treat—Patients Randomized to IXE at Week 0)	IXE Q4W N=122	IXE Q2W N=123
Response rate (mNRI), n/Nx (%)		
ACR20	73/122 (59.6)	59/123 (47.9)
ACR50	56/121 (46.2)	40/123 (32.5)
ACR70	28/122 (23.2)	27/121 (22.6)
MDA[b]	41/122 (33.2)	34/123 (27.8)
LEI=0[c]	31/68 (45.5)	32/84 (37.5)
LDI-B=0[d]	17/27 (63.0)	12/20 (60.0)
PASI 75[e]	44/68 (65.1)	33/68 (48.3)
PASI 90[e]	38/68 (55.3)	27/68 (40.3)
PASI 100[e]	27/68 (39.0)	24/68 (35.3)
Change from baseline (mBOCF), mean (SD)		
Baseline HAQ-DI total score	1.2 (0.6)	1.2 (0.6)
HAQ-DI, change from baseline	Nx=101 -0.4 (0.5)	Nx=103 -0.4 (0.6)
Safety[f] (All Patients Receiving ≥1 Dose of IXE)	**Total IXE Q4W N=168**	**Total IXE Q2W N=169**

rates in all efficacy outcomes. Most treatment-emergent adverse events (AEs) and serious AEs were mild or moderate in severity. Three deaths occurred due to myocardial infarction, metastatic renal cell carcinoma, and cardiopulmonary arrest.

Conclusion: IXE treatment provided clinically meaningful, sustained improvement in PsA signs and symptoms for up to 2 years in patients with prior inadequate response/intolerance to TNFi. No unexpected safety outcomes were reported.

P206 - RAPID AND SUSTAINED IMPROVEMENTS IN PATIENT-REPORTED OUTCOMES WITH IXEKIZUMAB IN BIOLOGIC-NAIVE AND TNF-INADEQUATE RESPONDER PATIENTS WITH PSORIATIC ARTHRITIS

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Background: Ixekizumab (IXE), a high-affinity monoclonal antibody that selectively targets IL-17A, has shown improvements in sign and symptoms of psoriatic arthritis (PsA) in patients who were biologic naïve and in patients who failed prior TNF-inhibitors (TNFi-inadequate responders [IR]). Here, we report the onset and duration of IXE treatment effect on patient-reported outcomes (PROs).

Methods: The PROs data were taken from two phase-3 trials: SPIRIT-P1 (Population- bDMARDs naïve) and SPIRIT-P2 (TNFi-IR). Randomised patients received IXE 80 mg every 2 weeks (Q2W) and every 4 weeks (Q4W) after 160 mg initial dose, or placebo. The following PROs were assessed from baseline up to 108 weeks: Joint pain visual analog scale (VAS), patient global assessment (PatGA), fatigue numerical rating scale (NRS), and health assessment questionnaire- disability index (HAQ-DI).

Results: Patients treated with IXE Q4W dose in SPIRIT-P1 and -P2 studies reported rapid (as early as week

TABLE I. SUMMARY OF CHANGE FROM BASELINE IN INDIVIDUAL PATIENT REPORTED OUTCOMES OVER TIME UP TO WEEK 52

		SPIRIT-P1		SPIRIT-P2	
Patient Reported Outcomes	**LSM Changes from Baseline**	**Placebo (N = 106)**	**Ixekizumab 80 mg Q4W (N = 107)**	**Placebo (N = 118)**	**Ixekizumab 80mg Q4W (N = 122)**
Joint Pain (Visual Analog Scale)	Baseline, mean (SD)	58.5 (23.0)	60.1 (19.4)	63.9 (20.1)	63.9 (21.4)
	Week 1	-6.1 (1.9)	-14.5 (1.9)	-8.4 (2.7)	-19.7 (2.7)*
	Week 24	-14.0 (2.7)	-29.6 (2.5)*	-21.4 (4.0)	-36.9 (3.7)*
	Week 52	NA	-35.7 (2.8)	NA	-31.6 (2.5)
PatGA (Visual Analog Scale)	Baseline, mean (SD)	61.1 (22.7)	62.7 (19.1)	64.1 (21.5)	66.4 (20.5)
	Week 1	-8.2 (2.0)	-16.8 (2.0)	-9.0 (2.9)	-22.0 (2.9)*
	Week 24	-14.8 (2.7)	-33.8 (2.5)*	-19.0 (3.9)	-40.7 (3.7)*
	Week 52	NA	-39.0 (2.8)	NA	-36.7 (2.6)
HAQ-DI	Baseline, mean (SD)	1.2 (0.6)	1.2 (0.5)	1.2 (0.7)	1.2 (0.6)
	Week 1	-0.1 (0.0)	-0.2 (0.0)	-0.1 (0.1)	-0.3 (0.1)*
	Week 24	-0.2 (0.1)	-0.4 (0.1)*	-0.2 (0.1)	-0.6 (0.1)*
	Week 52	NA	-0.5 (0.1)	NA	-0.5 (0.1)
Fatigue Numerical Rating Scale	Baseline, mean (SD)	5.4 (2.2)	5.8 (2.3)	5.9 (2.3)	5.9 (2.5)
	Week 4	-0.6 (0.2)	-1.5 (0.2)**	-0.4 (0.3)	-1.6 (0.3)*
	Week 24	-1.3 (0.3)	-1.6 (0.2)	-0.7 (0.37)	-2.0 (0.4)*
	Week 52	NA	-2.2 (0.3)	NA	-2.2 (0.2)

HAQ-DI=Health Assessment Questionnaire-Disability Index; LSM=least squares mean; NA=not available; PatGA=patient global assessment.

*P<0.001 vs PBO.

**P=0.002 vs PBO.

1) and consistent improvement in PROs throughout 52 weeks (Table I). Long-term treatment until week 108 with IXE showed sustained improvement in PROs in SPIRIT-P1 and -P2 studies, with mean change (±standard deviation) from baseline (IXEQ4W) in fatigue NRS (-1.9±2.7 and -1.8±2.8) and HAQ-DI (-0.6±0.5 and -0.4±0.6), respectively. Safety profile of IXE in patients with PsA is consistent with previously reported safety results from pooled data of phase 3 trials and no new safety signals were identified with longer IXE treatment exposure.

Conclusion: These data demonstrate that patients with PsA treated with IXE achieve rapid and sustained improvements in PROs irrespective of prior biologic exposure.

P210 - EPSTEIN-BARR VIRUS SEROLOGICAL PROFILE AFFECTS CIRCULATING LYMPHOCYTES IN SJOGRENS SYNDROME

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Background: Sjögren's Syndrome (SS) is one of the most common systemic autoimmune diseases. Though many genetic, hormonal, and environmental triggers have been proposed for the dysregulated autoimmune response observed in primary SS (pSS), the aetiology of the disease is still unestablished. Amongst viral agents, Epstein-Barr virus (EBV) has been a strong candidate for the triggering of the autoimmune epithelitis occurring in pSS pathology. Moreover, EBV has also an important immunemodulatory effect, particularly regarding B and T cell compartments.

Objectives: We aimed to evaluate the EBV serology in pSS patients, and to compare it with other autoimmune patients and healthy controls (HC). In parallel, we have characterized the immune profile of pSS patients, in order to assess if the viral background affects the circulating lymphocytes.

Methods: We have recruited 34 pSS patients (2002 AECG criteria), 20 Rheumatoid arthritis (RA) patients (ACR/EULAR classification criteria) and 20 HC. Immunoenzymatic assays were used to determine the serum levels of IgG, IgA and IgM antibodies against EBV Nuclear Antigen (EBNA), Early Antigen (EA) and Capside antigen (VCA). Flow cytometry was used for the characterization of T and B cells, including regulatory (Tregs) and follicular (Tfh) T cells, T helper and Bm1-Bm5 subsets. Significance was considered for $p<0.05$.

Results: All sera were negative for VCA-IgM. Only 2 HC and 3 RA were positive for EA-IgA. For VCA-IgG and EBNA-IgG we found no differences in positive cases between groups (all participants, except 2 pSS were positive for VCA-IgG; 26/34 pSS, 16/20 RA and 13/20 HC were positive for EBNA-IgG). However, pSS patients evidenced more positive sera for EA-IgG than HC (32% vs 5%; p=0.0215) and RA (32% vs 20%; p=0.2312), suggesting a more prevalent state of late acute/chronic active infection in pSS.

Thus, according to the serologic pattern observed, we divided pSS patients in 3 groups: G1 (n=18), past infection (EA-IgG–, EBNA IgG+); G2 (n=11), late acute/chronic active infection (EA IgG+, EBNA IgG+/-), and G3 (n=5), without serological evidence of active infection (EA IgG–, EBNA IgG–). Within the T cell compartment, G2 patients presented increased percentages Tregs compared to G1 pSS patients (p=0.031). G1 and G2 patients presented increased CXCR3+ Th1 cells and CXCR3+ Tfh1 compared to G3 (Th1: G1vsG3, p=0.120 and G2vsG3, p=0.008; Tfh1: G1vsG3, p=0.003 and G2vsG3, p=0.067).

As for B cells, pSS patients are known to have increased percentages of transitional Bm2' cells in circulation, and in fact we found that these cells were also augmented in G2 patients compared to G1 (p=0.024). Moreover, plasmablasts (Bm3+Bm4) were increased in G1 and G2 patients compared to G3 (%, G1vsG3, p=0.088 and G2vsG3, p=0.003; absolute counts, G1vsG3, p=0.020 and G2vsG3, p=0.003). Plasmablasts were also slightly augmented in G2 patients compared to G1 (p=0.099).

Conclusions: Our study shows a higher prevalence of EA-IgG in pSS patients. Moreover, the distinct EBV serological profiles observed in pSS patients seem to affect circulating B and T cells. Particularly, pSS patients with serological evidence for late acute/chronic active infection show a more proinflammatory pattern, with

increased Th1 cells, and elevated transitional B cells with increased plasmablast differentiation. Despite the low number of cases and the absence of other confirmatory methodologies, our study reveals for the first time the association of EBV with distinct immune profile in pSS patients.

P211 - PERSISTENCE WITH BIOLOGIC THERAPY AND CAUSES OF SUSPENSION AMONG PATIENTS WITH PSORIATIC ARTHRITIS

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Introduction: Real-world persistence with biologic therapies among patients with psoriatic arthritis (PsA) provides insight into effectiveness of biologics and their safety profile. Our main objective was to evaluate the persistence of biologic therapy in patients with PsA and to identify reasons for discontinuation.

Material and Methods: Retrospective observational study which included patients with PsA, inscribed in Reuma.pt, observed at least twice in the Rheumatology day care unit (RDCU) of our Center until 2019/01/31 and who performed at least 1 administration of biologic therapy, prescribed for the treatment of PsA.

Results: 78 patients were included, 52 women (66.7%) and 26 men (33.3%), with a mean age at 1st biologic of 50.7±12,3 years and at last visit at the RDCU of 55.1±12.4 years. The mean time of disease evolution up to 1st biologic was 11.8±8.6 years. Regarding the prescribed biologic, 42.6% of the patients had at least 1 administration of etanercept, 34.3% of adalimumab, 6.5% of ustekinumab, 5.6% of golimumab, 5.6% of infiliximab, 3.7 % of secukinumab and 1.9% of certolizumab. Of the 78 patients, 42 (53.8%) remained with the 1st biologic, 22 (28.2%) switched to a 2nd, 11 (14.1%) permanently suspended the biologic and 3 (3.8 %) were lost to follow up. Of the 22 patients who had at least a 2nd biologic, 14 (63.6%) maintained this drug, 6 (27.2%) switched to a 3rd, 1 (4.5%) permanently suspended this treatment and 1 (4.5%) was lost to follow up. Of the 6 who had done a 3rd biologic, 4 (66.7%) maintained this therapy and 2 (33.3%) switched to the 4th biologic. The 2 patients who started a 5th biologic maintained this drug at the last evaluation at the RDCU. Among the 22 patients who switched, 16 (72.7%) did it once, 4 (18.2%) twice and 2 (9.1%) 3 times. Of the 108 biologic prescriptions, 62 (57.4%) were maintained, 42 (38.9%) were suspended, including 30 (27.8%) for switch and 12 (11.1%) for definitive discontinuation of biologic therapy, and the remaining 4 were lost to follow up. Sixteen of these prescriptions (14.8%) were suspended in 6 months and the biologic suspension rate was 30.6%, 47.2%, 56.5% and 63.9% at 1, 2, 3 and 4 years, respectively. The main reasons for suspension were: ineffectiveness (29 cases, 69.0%), side effects including infection (6 cases, 14.3%), neoplasia (3 cases, 7.1%), surgery (1 case), refusal (1 case) and withdrawal of the appointments (1 case). Of the 76 patients whose 1st biological was an anti-TNF, 20 (25.6%) switched at least once, 18 (90.0%) for a 2nd anti-TNF and 2 (10.0%) for a biologic of another class (1 for ustekinumab and 1for secukinumab). Ten (55.6%) of the patients on the 2nd anti-TNF remained on this drug, 6 (33.3%) switched, 1 permanently suspended biologic therapy because of an infection and 1 was lost follow-up while the 2 patients not under a 2nd anti-TNF maintained this 2nd biologic.

Discussion: More than half of the patients maintained the 1st biologic. Regarding the prescriptions after 4 years, more than 60% of the prescribed biologics were suspended, almost one-third for inefficiency and less than 15% because of side effects (specially infections).

Conclusion: Each patient runs a unique individual pathway in biologic therapy, and there is often a need for change due to ineffectiveness or adverse events. Therefore, it would be very useful if we could draw a profile of each patient individually to know at the outset what would be the most appropriate therapy for each one.

P214 - HELPER AND CYTOTOXIC FOLLICULAR T-CELLS IN SJOGRENS SYNDROME

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Introduction: Follicular T-cells, characterized by the expression of CXCR5, secrete interleukin 21 (IL-21) and help B-cell differentiation in lymphoid follicles. Thus, they are thought to play a key role in Sjögren's syndrome's (pSS) pathophysiology.
Objectives: To characterize circulating follicular helper (Tfh) and cytotoxic (Tfc) T-cells in peripheral blood (PB) from pSS patients, Rheumatoid Arthritis (RA) patients and healthy controls (HC), and to investigate how they correlate with B-cell subsets. We also aimed to explore associations between the Tfh and Tfc cells and clinical and laboratory features of pSS.
Methods: PB from 57 pSS patients, 20 RA patients and 24 HC was analysed by flow cytometry to characterize T and B-cell subsets, with CXCR5 defining Tfh and Tfc within CD4 and CD8 T cells, respectively. A stimulation assay was used to assess the production of IL-21 by CD4+ and CD8+ T-cells.
Results: Compared to HC, pSS and RA patients presented significantly lower lymphocyte absolute counts (1615 and 1935 cells/μL respectively, compared to 2228 cells/μL in HC, p<0.001 for HC vs pSS, p=0.018 for HC vs RA), and percentages (29.9% in pSS, 24.0% in RA, and 35.4% in HC, p=0.022 for HC vs pSS, and p<0.001 for HC vs RA). B-cell and T-cell absolute counts were also lower in both groups of patients compared to HC (in HC vs pSS, p=0.011 for B-cells and p<0.001 for T-cells; in HC vs RA, p<0.001 for B-cells and p=0.018 for T-cells). B-cells absolute counts and percentages in pSS were higher than in RA (177 vs 132 cells/μL, p=0.013; 9.7 vs 6.4%, p<0.001). pSS had lower CD4 T-cell percentages compared to HC (p=0.004). There were no differences in CD8 T-cells percentages between groups.

pSS patients presented lower absolute counts of CXCR5+ Tfh compared to RA (134 vs 181 cells/μL, p=0.038) and HC (134 vs 241 cells/μL, p<0.001), without differences in percentages. RA patients had lower percentages of CXCR5+ Tfc compared to pSS (2.1 vs 2.6%, p=0.113) and HC (2.1 vs 3.0%, p=0.046).

pSS patients exhibited higher percentages of IL21+CD4 and IL21+CD8 T cells (IL21+CD4 T cells: 12.4% in pSS vs 9.0% in RA, p=0.046; vs 9.7% in HC, p=0.028; IL21+CD8 T cells: 4.1% in pSS vs 2.3% in RA, p=0.001; vs 2.8% in HC, p=0.030).

In pSS patients, CXCR5+ Tfh correlated positively with the percentages of plasmablasts (r=0.262 for CD24-CD38++ cells, and r=0.282 for IgM-/+CD38++ cells). IL21+CD8 T cells correlated positively with the Naïve/Memory B cells ratio (r=0.323; p=0.014) and negatively with Bm1 memory B cells (r=-0.370; p=0.005). IL21+CD4 T cells behaved similarly, though without statistical significance.

Anti-SSA-positive patients (n=38) presented higher CD4+IL21+ (13.3 vs 8.5%, p=0.025) and CD8+IL21+ cells percentages (4.4 vs 4.0%, p=0.198) than SSA-negative patients (n=19). Although there were no differences between pSS patients with active (n=27) and inactive disease (n=30), a tendency for positive correlations was found between IL-21+CD4 and IL21+CD8 T-cells and the ESSDAI score (r=0.229, p=0.086 for CD4, r=0.223, p=0.096 for CD8). Moreover, ESSDAI correlated positively with the Tfh1/Tfh17 ratio.
Conclusions: pSS patients present a profile of circulating Tfh and Tfc distinct from RA and HC, both phenotypically and functionally. Our data support a crucial role for these cells in B cell development, as they correlate with B cells, in pSS patients, which are known to exhibit a typical circulating B cell compartment. Both Tfc and Tfh cells can be critical for disease pathophysiology and activity, as underlined by the correlations between these cells and ESSDAI scores.

P215 - VALOR ACRESCENTADO DAS SUBPOPULAÇÕES LINFOCITÁRIAS NA CLASSIFICAÇÃO DA SÍNDROME DE SJOGREN

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Introdução: Os critérios de classificação da Síndrome de Sjögren (SSP) de 2002 do American-European Consensus Group (AECG) e os novos critérios ACR/EU-

LAR de 2016 foram elaborados para seleção de doentes para fins de investigação. Uma vez que alguns doentes com diagnóstico clínico não cumprem estes critérios, são necessários novos biomarcadores que ajudem a classificar estes doentes.

O estudo das populações linfocitárias por citometria de fluxo tem contribuído para o conhecimento da patogénese da SSP. Adicionalmente, a presença de perfis específicos de populações linfocitárias na SSP poderá ter utilidade no diagnóstico.

Pretendemos avaliar o desempenho dos critérios AECG e ACR/EULAR em comparação com o diagnóstico clínico (considerado o padrão-ouro, PO), e avaliar o valor acrescentado na discriminação entre SSP e síndrome seco não-Sjögren (Sicca) com a inclusão de subpopulações linfocitárias em ambos os critérios.

Métodos: Incluíram-se 62 doentes com diagnóstico clínico de SSP e 63 doentes com Sicca.

As subpopulações de linfócitos B e T circulantes foram caraterizadas por citometria de fluxo.

Compararam-se ambos os critérios de classificação de 2002 e 2016 com o PO através das Áreas Under the Curve (AUC) receiver operating characteristic curve (ROC), e determinou-se o poder discriminativo. Seguidamente foi analisado o valor acrescentado pelas populações linfocitárias aos modelos estimados anteriormente (apenas com os critérios de classificação). Para esta avaliação foram igualmente utilizadas as AUC, comparadas pelo teste de DeLong. Foi utilizado o modelo Firth's Bias-Reduced Logistic Regression para lidar com o problema da separabilidade inerente aos dados. Um valor de $p<0,05$ foi considerado significativo.

Resultados: Das populações linfocitárias analisadas, foram seleccionadas para estudo os linfócitos T-foliculares CXCR5+ (Tfh), as células B de memória (totais e com switch), as Bm1, as Breg CD24hiCD27+, e a razão Th1/Breg CD24hiCD27+.

Procedeu-se à comparação dos critérios de 2002 e 2016 com o PO, de modo a avaliar o poder discriminativo entre doentes com SSP e Sicca, resultando taxas de concordância de 95,2% e 92,0%, respetivamente. Os dois critérios concordaram em 95,2% dos casos. Realizou-se ainda uma análise do poder discriminativo dos critérios de classificação tendo em conta o PO, tendo-se obtido uma AUC=0,952 (I.C. 95% 0,916; 0,989) para os critérios de 2002 e uma AUC=0,921(I.C. 95% 0,875; 0,966) para os critérios de 2016.

O valor acrescentado aos critérios AECG de 2002 foi maximizado quando consideradas as variáveis Tfh e Bm1 (ambas em percentagem), tendo-se obtido uma AUC=0,985 (I.C. 95% 0,968; 1,000). Para os critérios de 2016, as variáveis Th1/Breg CD24hiCD27+ e B-memória com switch (dicotomizada com um cutoff=25 células/µl) maximizaram a AUC para 0,953 (0,916-0,990).

Em ambos os casos a introdução das novas variáveis para discriminar entre SSP e Sicca conduziram a resultados com significado estatístico (p= 0,021 e p=0,043, respectivamente para os critérios de 2002 e 2016).

Conclusões: O nosso estudo confirmou o elevado grau de concordância entre os critérios de classificação e o diagnóstico clínico, com superioridade dos AECG face aos ACR/EULAR.

O estudo das populações linfocitárias pode ter utilidade no diagnóstico/classificação da SSP, uma vez que o poder discriminativo de ambos os critérios aumenta quando se adiciona ao modelo os valores de populações linfocitárias específicas. No entanto, são necessários mais estudos, com amostras maiores, para confirmar estes resultados.

P218 - SKIN OUTCOMES IN LIMITED SYSTEMIC SCLEROSIS: DATA OF TERTIARY CENTER

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Background: Several studies have consistently showed that the extent of skin involvement has a major impact on disease prognosis in the diffuse cutaneous subtype of systemic sclerosis. However, there is scarce data regarding skin course in the limited cutaneous subset (LcSSc).

Objectives: Our aims were to (1) to investigate skin involvement course, and (2) identify predictors for this course in patients with LcSSc, using our cohort registry.

Methods: We performed a retrospective analysis including patients with LcSSc fulfilling the 2103 ACR/EULAR Classification Criteria for Systemic Sclerosis. Skin improvement, progression or stable course was defined by a cut-off of plus or minus 3.5 points change in mRSS from baseline to last appointment. The European Scleroderma Trial and Research (EUSTAR) group Disease Activity Index (EUSTARDAI), clinical and laboratorial features were assessed. Baseline characteristics were compared between groups using chi-square and independent samples t-test, as appropriate. Logistic regression analysis was performed to identify possible predictive factors associated with skin course

TABLE I. EPIDEMIOLOGIC, SEROLOGICAL AND CLINICAL FEATURES OF THE 71 PATIENTS WITH LcSSc

Gender (F/M), n (%)	62 (87.3)
Age (years), mean (SD) or median (range)	55.7 (11.6)
Disease duration (from 1st non-Raynaud manifestation) (years), mean (SD)	15.56 (9.2)
ANA positive	64 (91.4)
ACA positive	53 (71.7)
Anti-Scl-70 antibody positive	3 (4.3)
Raynaud's phenomenon, n (%)	54 (83.1)
Telangiectasia, n (%)	19 (29.7)
Skin fibrosis, n (%)	33 (52.4)
mRSS, median (IQR)	4 (0-10)
Active digital ulcers, n (%)	13 (18.8)
Oesophageal, stomach and/or intestinal involvement, n (%)‡	12 (16.9)
Arthritis, n (%)	28 (40.6)
Interstitial lung disease (X-ray or CT), n (%)§	8 (11.3)
DLCO, % of the predicted value, mean (SD)	90.9 (23.0)
FVC, % of the predicted value, mean, (SD)	96.9 (7.0)
EUSTAR-DAI <2.5	57 (87.7)

‡dysphagia and/or heartburn and/or bloating and/or vomiting and/or diarrhoea and/or constipation; §either ground glass or interstitial fibrosis as detected at lung high-resolution CT or X-Ray; ANA (Antinuclear antibodies); ACA (Anticentromere antibody); FVC (forced vital capacity); DLCO (diffusing lung for carbon monoxide).

involvement.

Results: We included 71 LcSSc patients [87.2% female, mean age at diagnosis 55.7 (SD 11.6) years]. At baseline median mRSS (IQR) was 4.0 (0-10) (Table I). The mean follow-up time was 15.5±9.2 years from baseline to last appointment. Maintenance of mRSS was observed in 65.2% (n=45), improvement in 27.6% (n=21) and progression in 7.2% (n=5) of the patients. Patients with stable mRSS were significantly older at baseline than improvers (p=0.05). In addition, these patients had more frequently digital ulcers, arthritis and positive antinuclear and anti-centromere antibodies than patients that improve, although not statistically significant. LcSSc patients with an inactive disease (EUSTAR-DAI<2.5) at baseline tend to have a stable mRSS course (p=0.001). In multivariate analysis, no predictors were identified for skin disease progression.

Conclusions: Recognizing distinct patterns of mRSS course could help tailoring clinical management and cohort enrichment. Studies with a larger sample size will be needed to shed some light on skin involvement and its prognostic value in LcSSc.

P219 - THE ROLE OF ANXIETY AND DEPRESSION SYMPTOMS ON THE OUTCOMES OF CHRONIC LOW BACK PAIN MULTIDISCIPLINARY TREATMENT – A PROSPECTIVE MULTICENTER COHORT STUDY

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Background and aims: anxiety and depression commonly coexist in patients with chronic low back pain (CLBP). However, little is known about the impact of baseline anxiety and depression symptoms on the outcomes of multidisciplinary treatments. Thus, this study explored the impact of these symptoms on the outcomes of multidisciplinary treatments in chronic pain (CP) clinics, one year after the beginning of treatment.

Methods: in this prospective multicenter cohort study, 284 patients (60.36±13.72 years; 74.6% female) with CLBP were included during their first consultation in four multidisciplinary CP clinics. Anxiety and depression were assessed with the Hospital Anxiety and Depression Scale (HADS) and scores ≥8 were considered clinically significant. The Brief Pain Inventory (BPI) and the Shortened Treatment Outcomes in Pain Survey (S-TOPS) were used to assess outcomes. Linear mixed effects models were used to assess the impact of anxiety, depression and their interaction on treatment outcomes.

Results: the majority of patients with CLBP had clinically significant anxiety (72.9%) and depression (58.1%) symptoms. Anxiety and depression had an independent effect on the changes in the BPI interference (p<0.001 for both symptoms) and the S-TOPS pain symptom (p=0.033 and p=0.030, respectively) sub-scales over time. Anxiety also predicted changes in the BPI severity (p=0.027) and depression predicted S-TOPS satisfaction with outcomes (p=0.004). The interaction between anxiety and depression symptoms significantly predicts changes in the BPI interference (p<0.001).

Conclusions: these findings encourage the pre-treatment screening of anxiety and depression as independent symptoms in patients with CLBP in order to design more individualized multidisciplinary treatments.