Grant/research support from: MSD, R. Roque Grant/research support from: MSD, J. Rovisco Grant/research support from: MSD, M. Marques Grant/research support from: MSD, J. Tavares-Costa Grant/research support from: MSD, J. Silva Grant/research support from: MSD, H. Santos Grant/research support from: MSD, N. Madeira Grant/research support from: MSD, E. Vieira-Sousa Grant/research support from: MSD, R. Machado Grant/research support from: MSD, M. Bernardes Grant/research support from: MSD, R. Ferreira Grant/research support from: MSD, S. Ramiro Grant/research support from: MSD
DOI: 10.1136/annrheumdis-2018-eular.2558

SAT0261

CERTOLIZUMAB PEGOL SERUM LEVELS ≥ 20 MG/L ARE ASSOCIATED WITH TREATMENT RESPONSE IN PATIENTS WITH AXIAL SPONDYLOARTHRITIS. DATA FROM THE NOR-DMARD STUDY

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Background: Measurement of serum drug levels can help clinicians tailor treatment with TNF-inhibitors. An association between certolizumab pegol (CP) serum levels and response has previously been found in patients (pts) with rheumatoid arthritis. ¹ Data for pts with axial spondyloarthritis (axSpA) are lacking.

Objectives: To examine the association between serum CP levels and treatment response in pts with axSpA and to identify a therapeutic target level.

Methods: Patients with a clinical diagnosis of axSpA starting standard treatment with CP included in the NOR-DMARD study with biobank sample at 3 months follow-up, were included in the present analyses. Serum drug levels (non-trough) were analysed with an in-house immunofluorometric assay automated on the AutoDELFA immunoassay platform. Associations between CP level and improvement in ASDAS-CRP and response (defined as ASDAS clinically important improvement (CII)) were assessed by multivariable linear and logistic regression (adjusting for age, sex and prior bDMARD (Y/N)), respectively.

Results: Median serum drug level at 3 month follow up was 35.0 mg/L (IQR 21.3–45.3) in 116 pts. Response data were available in 110/116 patients. Serum CP level ≥ 20 mg/L was associated with improvement in ASDAS at 3 months ($\beta=0.55$, (95% CI 0.12–1.98), $p=0.01$). Serum CP level ≥ 20 mg/L was associated with ASDAS CII at 3 months (OR 3.4 (95% CI 1.0–11.1, $p=0.045$)). Only 18.2% of pts with CP level <20 mg/L achieved ASDAS CII at 3 months, while 53.2% of pts with CP level 20–40 mg/L and 36.6% with ≥ 40 mg/L were responders.

Conclusions: Serum CP level was associated with clinical response after 3 months of treatment in pts with axSpA. We suggest 20 mg/L as a lower target level for non-trough samples. No additional benefit of having a certolizumab level over 40 mg/L was observed. These results suggest that a therapeutic level of 20–40 mg/L can be implemented in clinical practice for non-trough serum samples in pts with axSpA.

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Disclosure of Interest: J. E. Gehin Consultant for: Roche, S. Syversen Consultant for: Roche, D. Warren: None declared, G. Goll Consultant for: Abbvie, Biogen, Boehringer Ingelheim, Orion Pharma, Eli Lilly, Novartis, Pfizer, MSD, Roche, UCB, J. Sexton: None declared, E. Strand Consultant for: Pfizer, T. Kvien Consultant for: AbbVie, Biogen, BMS, Boehringer Ingelheim, Celgene, Celltrion, Eli Lilly, Epirus, Hospira, Merck-Serono, MSD, Mundipharma, Novartis, Oktal, Orion Pharma, Hospira/Pfizer, Roche, Sandoz, UCB, N. Bolstad Consultant for: Pfizer, Orion Pharma, Napp pharmaceuticals, Takeda, Roche, E. Lie: None declared
DOI: 10.1136/annrheumdis-2018-eular.5252

SAT0262

3-YEAR FOLLOW-UP OF A DOSE TAPERING PROTOCOL OF ANTI-TNF THERAPY IN A COHORT OF PATIENTS WITH SPONDYLOARTHRITIS (SPA) IN CLINICAL REMISSION UNDER CONDITIONS OF CLINICAL PRACTICE

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Background: The dose tapering of biological therapy in patients in clinical remission is a strategy used in recent years in Rheumatology, consists in the reduction of the dose administered or in the extension of the interval between two doses, some studies suggest the possibility that patients with sustained remission could obtain the same benefit with a lower dose.

Objectives: Evaluate the effectiveness of 3 year follow-up of a dose tapering in patients with SpA in maintained clinical remission and detect possible predictors of maintenance of the response.

Methods: Retrospective observational study, all patients with SpA were included, according to ASAS criteria, treated with antiTNF, with dose tapering, from October 2014-December 2017. Clinical remission defined by BASDAI ≤ 2 and/or CRP ≤ 5 mg/L for at least 6 months, establishing dose tapering as lower doses or longer intervals (according to the guidelines of the Spanish Society of Rheumatology and Pharmacy). Those patients who relapsed (BASDAI >2 and/or CRP >5 mg/L) at any time during the study returned to the standard dose. Clinical and analytical parameters were collected (baseline and at the time of optimisation), as well as the survival of the drug and the efficacy parameters until the time of relapse and who continued in dose tapering.

Results: 149 patients with SpA in treatment with antiTNF, 38/149 (25.5%) included in the dose tapering protocol, 84.4% men and the mean age 47.2 ± 10.6 years. The antecedents 25% uveitis, 6.3% psoriasis and 6.3% inflammatory bowel disease. Regarding the type of optimisation strategy, 32 patients (84.37%) followed the protocol for increasing the interval between doses, compared to the rest (15.62%) who used reduced doses. We found 27/38 patients (71.05%, CI: 55.2–83) maintained clinical remission with tapering, 9 (33.3%) infliximab, 7 (25.9%) golimumab, 6 (22.2%) etanercept and 5 (18.5%) adalimumab, at a time of drug follow-up of 57.9 ± 29.7 months. The demographic factors analysed sex, age, time of evolution and clinical remission, were not found as possible predictors of greater survival in the dose tapering.

	PATIENTS RELAPSE (n=11)			PATIENTS REMISSION (n=27)		
	Basal	Start tapering	Relapse	Basal	Start tapering	Last visit
BASDAI (0–10)	3.8 $\pm$ 2.4	2 $\pm$ 1.8	3.18 $\pm$ 2.27	4.4 $\pm$ 2.8	2.1 $\pm$ 2.5	1.5 $\pm$ 1.6
BASFI (0–10)	4.3 $\pm$ 2.8	2.8 $\pm$ 2.8	2.9 $\pm$ 2.37	3.7 $\pm$ 2.6	2.8 $\pm$ 3.1	2.0 $\pm$ 2.4
ESR (mm/1 st h)	17.1	9.3 $\pm$ 11.1	11.84	20.4	7.8 $\pm$ 6.1	8.4 $\pm$ 7.6
	$\pm$ 22.5		$\pm$ 11.29	$\pm$ 18.8		
CPR (mg/L)	10.9	9.7 $\pm$ 12.4	3.84 $\pm$ 4.54	14.6	3.7 $\pm$ 6.1	2.69 $\pm$ 3.0
	$\pm$ 12.2		$\pm$ 22.5	$\pm$ 22.5		
n=38						
Age (years, mean $\pm$ SD)	47.2 $\pm$ 10.6					
Sex (%) Man/woman	84.4/15.6					
Time of evolution disease (years, mean $\pm$ SD)	12.2 $\pm$ 10.4					
Start biological therapy (months, mean $\pm$ SD)	22.84 $\pm$ 12.68					
	Start anti-TNF		Start tapering			
	4.2 $\pm$ 2.6		2.07 $\pm$ 1.96			
BASDAI (0–10)						
BASFI (0–10)	4 $\pm$ 2.7		2.8 $\pm$ 2.9			
CPR (mg/L)	13.1 $\pm$ 18.7		6.4 $\pm$ 9.7			
ESR (mm/1 st h)	19 $\pm$ 20.1		8.5 $\pm$ 8.5			

Conclusions: The monitoring of dose tapering of biological therapy in patients with SpA is possible and allows more than 70% of patients to maintain the clinical remission of the disease. However, a greater number of patients and longer follow-up are necessary for a solid conclusion. Additionally, our results do not show possible predictors of a longer survival in tapering protocol.

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Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.2964

SAT0263

PREDICTORS OF REMISSION MAINTENANCE AND SUCCESSFUL THERAPY DISCONTINUATION IN PATIENTS WITH NON-RADIOGRAPHIC AXIAL SPONDYLOARTHRITIS (NR-AXSPA) WHO ACHIEVED SUSTAINED REMISSION ON OPEN-LABEL ADALIMUMAB (ADA) TREATMENT

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Background: Sustained remission is an important treatment goal in patients (pts) with non-radiographic axial SpA (nr-axSpA). Factors predicting successful remission maintenance are unknown.

Objectives: We sought to identify predictors of remission maintenance in nr-axSpA pts who achieved remission after open-label (OL) adalimumab (ADA) treatment in the ABILITY-3 trial (NCT01808118) and were subsequently randomised to continuation or withdrawal of ADA therapy.

Methods: ABILITY-3 enrolled adult pts with nr-axSpA with objective evidence of active MRI inflammation in the SI joints or spine or elevated high-sensitivity CRP at screening, active disease at baseline (ASDAS_{2.1} ≥ 2.1, BASDAI_{2.1} ≥ 4, and Patient's Assessment of Total Back Pain score ≥ 4), and inadequate response to ≥ 2 NSAIDs (table 1). Pts received ADA 40 mg every other wk during a 28-wk OL lead-in period. Pts who achieved sustained remission, defined as ASDAS inactive disease [ID] score < 1.3 at wks 16, 20, 24, and 28, were randomised to double-blind withdrawal (placebo; PBO) or continued ADA for 40 wks during period 2 (study wk 68). Stepwise logistic regression was used to identify predictors of sustained remission in those in the continued ADA and withdrawal (PBO) groups. Remission maintenance in period 2 was assessed with the following: ASAS partial remission (PR; score ≤ 2.0) and ASDAS ID at wk 68, ASAS PR and ASDAS ID at every visit, and ASDAS ID for ≥ 5 of 10 visits.

Abstract SAT0263 – Table 1. Characteristics at Baseline and Wk 28

Variable	ADA (40 mg EOW) n=152	PBO n=153	P Value	Wk 28, mean (SD)	ADA (40 mg EOW) n=152	PBO n=153	P Value
Age, y	34.7 (10.3)	35.3 (10.2)	0.611	ASDAS	0.7 (0.4)	0.6 (0.4)	0.355
Female, n (%)	56 (37)	60 (39)	0.724	BASDAI	0.8 (0.8)	0.7 (0.7)	0.145
SpA symptom duration, y	6.4 (6.9)	7.1 (6.8)	0.358	BASFI	0.7 (1.0)	0.7 (1.2)	0.994
HLA-B27 positive, n (%)	132 (87)	134 (88)	0.866	Hs-CRP, mg/L	1.5 (2.4)	1.4 (1.8)	0.647
ASDAS	3.5 (0.9)	3.5 (0.8)	0.851	Pt total back pain	1.1 (1.4)	1.0 (1.4)	0.567
BASDAI	6.8 (1.4)	6.8 (1.5)	0.851	PGA	0.8 (1.0)	0.9 (1.1)	0.386
BASFI	5.1 (2.3)	5.0 (2.3)	0.776	SPARCC SI joint score*	2.6 (6.1)	2.5 (4.0)	0.775
Hs-CRP, mg/L	9.9 (14.1)	9.1 (13.3)	0.576	SPARCC spine score*	1.2 (3.8)	1.2 (3.8)	0.889
Pt total back pain	7.0 (1.7)	7.0 (1.8)	0.946				
PGA	6.6 (1.5)	6.4 (1.4)	0.150				
SPARCC SI joint score*	8.5 (12.8)	10.3 (13.4)	0.226				
SPARCC spine score	3.3 (7.5)	3.6 (7.2)	0.671				

ASDAS, Ankylosing Spondylitis Disease Activity Score; BASDAI, Bath Ankylosing Spondylitis Disease Activity Index; BASFI, Bath Ankylosing Spondylitis Functional Index; EOW, every other week; HLA-B27, human leukocyte antigen B27; Hs-CRP, high-sensitivity C-reactive protein; PGA, physician global assessment of disease activity; Pt, patient; SI, sacroiliac; SpA, spondyloarthritis; SPARCC, Spondyloarthritis Research Consortium of Canada.

*P value using analysis of variance. *ADA, n=150; PBO, n=151. *ADA, n=145; PBO, n=148. *ADA, n=149; PBO, n=150.

Results: By wk 68, 100/145 (69%) ADA pts had not flared, 41% achieved ASAS PR and 56% ASDAS ID at wk 68; 23% achieved ASAS PR and 29% ASDAS ID at every visit, while 70% achieved ASDAS ID for ≥ 5 of 10 visits. By wk 68, 70/148 (47%) PBO pts had not flared, 28% achieved ASAS PR and 33% ASDAS ID at wk 68; 14% achieved ASAS PR and 15% ASDAS ID at every visit, while 52% achieved ASDAS ID for ≥ 5 of 10 visits. Shorter symptom duration, lower wk 28 BASDAI, and male sex were associated with absence of flare in the continued ADA group. Lower wk 28 ASDAS was associated with absence of flare with ADA withdrawal. Lower wk 28 ASDAS consistently predicted ASAS PR and ASDAS ID

at wk 68, ASAS PR and ASDAS ID at every visit, and ASDAS ID for ≥ 5 of 10 visits in pts who continued or withdrew ADA.

Conclusions: In nr-axSpA pts who achieved remission after 28-wk OL ADA therapy, lower wk 28 ASDAS is a consistent predictor of remission maintenance using all definitions in both the adalimumab continuation and withdrawal groups, except absence of flare in the adalimumab continuation group, suggesting early aggressive treatment may be beneficial in achieving sustained remission.

Acknowledgements: AbbVie funded the study, contributed to its design and participated in data collection, analysis and interpretation of the data, and in writing, review, and approval of the publication. Medical writing support was provided by Maria Hovenden, PhD, and Janet E. Matsuura, PhD, of Complete Publication Solutions, LLC (North Wales, PA) and was funded by AbbVie.

Disclosure of Interest: J. Sieper Consultant for: AbbVie, Janssen, Lilly, Merck, Novartis, Pfizer, Sun Pharma, and UCB, Speakers bureau: AbbVie, Janssen, Lilly, Merck, Novartis, and Pfizer., R. Landewé Grant/research support from: Abbott, Amgen, Centocor, Novartis, Pfizer, Roche, Schering-Plough, UCB, and Wyeth, Consultant for: consulting or advisory board fees from Abbott/AbbVie, Ablynx, Amgen, Astra-Zeneca, Bristol Myers Squibb, Celgene, Janssen (formerly Centocor), Galapagos, GlaxoSmithKline, Novartis, Novo-Nordisk, Merck, Pfizer, Roche, Schering-Plough, TiGenix, UCB, and Wyeth, Employee of: he is director of Rheumatology Consultancy BV, a registered Dutch company., Speakers bureau: Abbott/AbbVie, Amgen, Bristol Myers Squibb, Janssen (formerly Centocor), Merck, Pfizer, Roche, Schering-Plough, UCB, Wyeth, M. Magrey Grant/research support from: Amgen, AbbVie, and UCB Pharma, Consultant for: UCB and Janssen, J. Anderson Shareholder of: AbbVie, Employee of: AbbVie, S. Zhong Shareholder of: AbbVie, Employee of: AbbVie, X. Wang Shareholder of: AbbVie, Employee of: AbbVie, A. Lertratanakul Shareholder of: AbbVie, Employee of: AbbVie

DOI: 10.1136/annrheumdis-2018-eular.2632

SAT0264

DOES BIOLOGICAL DISEASE-MODIFYING ANTI-RHEUMATIC DRUG NAÏVE VERSUS NON-NAÏVE PATIENTS WITH INFLAMMATORY JOINT DISEASES HAVE SIMILAR GOLIMUMAB DRUG SURVIVAL AND EFFICACY? DATA FROM THE PROSPECTIVE OBSERVATIONAL NOR-DMARD STUDY

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Background: Knowledge is limited regarding the impact of previously used biological disease modifying anti-rheumatic drugs (bDMARD) on golimumab drug survival and efficacy in inflammatory joint diseases (IJD).

Objectives: To explore golimumab drug survival and efficacy in bDMARD naïve vs. non-naïve IJD patients, as well as predictors of golimumab discontinuation.

Methods: From the observational prospective multicenter Norwegian-DMARD (NOR-DMARD) study rheumatoid arthritis (RA), psoriatic arthritis (PsA) and axial spondyloarthritis (ax-SpA) patients starting golimumab were included. Drug survival was explored by Kaplan-Meier analyses with comparison of bDMARD naïve vs. non-naïve patients with log rank test, stratified by diagnosis. 3 month responses were compared with independent t-test, and with ANCOVA adjusted for age, gender, disease duration and baseline values of the respective composite scores. Univariable and multivariable Cox regression analyses including age, gender, disease duration, smoking, concomitant synthetic DMARDs (sDMARDs) and previous bDMARD use were performed to identify predictors of golimumab discontinuation.

Results: Mean (SD) age of the 163 RA, 267 PsA and 382 ax-SpA patients was 51.2 (14.1)/48.1 (11.7)/41.8 (11.1) years, disease duration 11.3 (10.0)/8.7 (9.0)/10.6 (11.2) years, %females 76.1/55.1/44.1%, respectively. Golimumab drug

Diagnosis	Composite score	Changes (baseline minus 3 months)					
		Unadjusted analyses		p-value	Adjusted analyses		p-value
		Mean (SD)			Estimated marginal means (95% CI)		
		bDMARD naïve patients	Previous bDMARD users		bDMARD naïve patients	Previous bDMARD users	
RA	Δ DAS28	−1.1 (1.3)	−0.7 (3.42)	0.39	−1.7 (−2.6,−0.7)	−0.6 (−1.5, 0.2)	0.08
	Δ CDAI	−9.0 (10.8)	−9.0 (13.2)	0.99	−11.7 (−14.5,−8.9)	−8.7 (−11.2,−6.1)	0.10
PsA	Δ DAS28	−1.2 (1.1)	−0.5 (1.0)	<0.001	−1.0 (−1.3,−0.8)	−0.6 (−0.8,−0.3)	0.01
	Δ CDAI	−7.1 (7.8)	3.8 (7.5)	0.005	−6.2 (−7.6,−4.8)	−4.8 (−6.3,−3.3)	0.18
Ax-SpA	Δ BASDAI	−1.4 (2.1)	−0.6 (2.1)	0.08	−1.2 (−1.6,−0.8)	−0.9 (−1.4,−0.5)	0.38
	Δ BASDAI	−1.9 (2.4)	−0.9 (2.1)	<0.001	−1.9 (−2.3,−1.6)	−0.8 (−1.2,−0.4)	<0.001
	Δ ASDAS	−1.2 (1.3)	−0.5 (1.1)	<0.001	−1.1 (−1.3,−0.9)	−0.5 (−0.8,−0.3)	<0.001

Identified predictors for golimumab discontinuation were [Hazard Ratio (95% CI)]: RA, None; PsA, female gender (1.63 (1.18-2.25), p=0.003) and no concomitant sDMARDs (1.39 (1.01-1.90), p=0.04); ax-SpA, female gender [1.97 (1.50-2.60), p<0.001].