gender (69.2% vs. 54.3%; $p=0.02$), condition of "current smoker" (22.1% vs. 10.9%; $p=0.012$), ESR [median (IQR): 30.0 (19.0-48.0) vs. 40.0 (25-62); $p=0.035$] and DAS28 (mean $\pm$ standard deviation: 5.5 ± 1.1 vs. 5.2 ± 1.3 ; $p=0.037$). High-titre positivity for RF and/or ACPA (57.3% vs. 45.9%; $p=0.095$) and high cumulative steroids dose [852 mg (300-1200) vs. 691 mg (0-150); $p=0.071$] were numerically higher in IR.

In multivariate analysis, the "current smoker" condition was confirmed as the only independent factor associated with IR to MTX after 6 months of treatment (OR: 2.333, 95% CI: 1.132-4.805; $p=0.022$).

No significant association between ex-smoker status and IR to MTX was demonstrated. This result was confirmed even after stratification of ex-smokers over the time since smoking stop. Finally, for both current smokers and ex-smokers, the duration of exposure to cigarette smoking did not show any significant association with IR.

Conclusion: In this RA cohort, the condition of "current smoker" was the only predictor of IR to MTX. This observation, together with the lack of association between previous smoking habit and IR to MTX, further prompt to recommend cessation of cigarette smoking in patients with RA who begin treatment with MTX.

Table 1. Baseline demographic, clinical and serological features.

Gender, n (%) Female	142 (60.9%)
Age at enrollment, mean ($\pm$ SD), yrs	54.2 ($\pm$ 14.5)
RF/ACPA positivity, n (%)	132 (60.5%)
BMI, mean ($\pm$ SD) Kg/m ²	24.9 ($\pm$ 4.1)
Current smoker, n (%)	37 (15.9%)
Ex smoker, n (%)	89 (38.2%)
DAS28, mean ($\pm$ SD)	5.3 ($\pm$ 1.2)
TJC28, median (IQR)	9 (5-15)
SJC28, median (IQR)	5 (2-10)
ESR, mean ($\pm$ SD)	39.9 ($\pm$ 24.9)
X-ray Erosion, n (%)	36 (22.3%)
Rheumatoid Nodules, n (%)	8 (3.4%)

DS: standard deviation; RF: factor rheumatoid factor; ACPA: anti-citrullinated peptide antibodies; BMI: body mass index; DAS-28: disease activity score; TJC: tender joint count; SJC: swollen joint count; ESR: erythrocytes sedimentation rate.

Acknowledgement: This study was supported by an unconditioned Research grant from Pfizer Inc.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2019-eular.7734

THU0096

PERSISTENT HIGH DISEASE ACTIVITY IN THE ANTI-CARBAMYLATED PROTEIN ANTIBODY POSITIVE EARLY ARTHRITIS PATIENTS INDEPENDENTLY OF TREATMENT

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Background: There is great interest in the identification of prognostic biomarkers informing early therapeutic decisions for the improvement of rheumatoid arthritis (RA) evolution. Promising results in early arthritis (EA) patients indicate the anti-carbamylated protein antibodies (ACarPA) may serve this function. In effect, they are associated with high baseline disease activity and, in our patients, with less improvement in the first 6-months of follow-up. This association was independent of sex, age at diagnosis, time since symptoms onset, smoking and the year of onset. However, the influence of the treatment has not been explored yet.

Objectives: We aimed to explore the influence of the initial treatment on the persistent high disease activity associated with the presence of ACarPA in EA patients.

Methods: Samples were obtained at the first visit of two EA cohorts from Hospital Universitario La Paz and Hospital Universitario La Princesa, which recruit patients within one year from the clinical onset. Information on the initial treatment and the disease activity at the baseline and at 6-months of follow-up was available from 546 patients. Treatment was categorized according to the use of corticosteroids, methotrexate (MTX) and other DMARDs, and considering changes in the first 6 months. In addition, MTX dose was considered either quantitatively or as a dichotomous

variable (≥ 12.5 mg and < 12.5 mg). Main effects general linear regression was used for analysis, including the treatment and the other confounders as covariates.

Results: A large fraction (83%) of the EA patients received specific treatment from the initial visit. It comprised DMARD (50.1%), corticosteroids (10.6%), or a combination of both (39.3%). The most common DMARD was MTX (82.2%), whereas less frequently used medications included sulfasalazine (5.4%), leflunomide (3.2%), hydroxychloroquine (8.1%) and other (1.0%). The 35.5% of the treated patients maintained the treatment during the 6-month follow-up. The presence of ACarPA was associated with a 0.45 higher mean baseline DAS28 and with less decrease of DAS28 (Δ DAS28) from the baseline to 6 months of follow-up ($\beta = 0.08$, $p = 0.016$), as already communicated. This latter association persisted without modification after accounting for the initial treatment (DMARD, corticosteroids, and changes in treatment). In addition, it was independent of the consideration of all DMARDs in a single group, or separated into two categories: MTX and the other. Similarly, the association was independent on MTX dose, defined both as a categorical or a quantitative variable.

Conclusion: The association of ACarPA with a persistently increased disease activity in EA patients is independent of the initial treatment. These results reinforce the possibility that ACarPA can be useful as prognostic biomarkers for the first 6 months of evolution and indicate the need for personalized management of the patients carrying ACarPA.

Acknowledgement: Supported by grants PI17/01606 and RD16/0012/0014 of the Instituto de Salud Carlos III (Spain) that are partially financed by FEDER.

Disclosure of Interests: Cristina Regueiro : None declared, Ana Ortiz: None declared, Laura Nuño: None declared, Diana Peiteado: None declared, Alejandro Villalva: None declared, Dora Pascual Salcedo: None declared, ANA MARTÍNEZ-FEITO: None declared, Alejandro Balsa Grant/ research support from: Abbvie, Pfizer, Novartis, BMS, Nordic, Sanofi, Consultant for: Abbvie, Pfizer, Novartis, BMS, Nordic, Sanofi, Sandoz, Lilly, Paid instructor for: Pfizer, Speakers bureau: Pfizer, Novartis, UCB, Nordic, Sanofi, Sandoz, Lilly, Isidoro González-Álvarez: None declared, Antonio Gonzalez: None declared

DOI: 10.1136/annrheumdis-2019-eular.4696

THU0097

VALUE OF ANTIBODIES AGAINST ACETYLATED PEPTIDES FOR THE CLASSIFICATION OF PATIENTS WITH EARLY ARTHRITIS

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Background: Patients with rheumatoid arthritis (RA) achieve the best response when they receive adequate treatment as soon as possible. This fact motivated the modification of the classification criteria by the ACR and the EULAR in 2010 to enable early detection. One of the changes is the increased weight conferred to the autoantibodies: rheumatoid factor and anti-citrullinated protein antibodies. As these antibodies are not present in all patients, other antibodies could provide similar information. In this regard, the antibodies that recognize an acetylated peptide from mutated vimentin (Anti-Acetylated Peptide Antibodies or AAPA) stand out (1).

Objectives: We aimed to evaluate the AAPA predictive value at the baseline visit for the classification of early arthritis patients.

Methods: A total of 438 patients with available samples and information were randomly selected from two early arthritis clinics. The AAPA were determined in baseline sera as previously described (1). Two peptides were included, one acetylated at a lysine (anti-AcLys) and the other at an ornithine (anti-AcOrn) and considered either individually or combined. The sensitivity, specificity, predictive positive (PPV) and negative (PNV) values and the AUC of the ROC curve were assessed. Logistic regression was also applied adjusting for age, sex, the centre of origin, anti-CCP, and RF. The study was approved by the ethics committee of the Hospital Universitario La Paz, the Hospital Universitario La Princesa, and Autnómico de Galicia.

Results: The AAPA at baseline were sensitive and specific for the classification of the patients fulfilling RA criteria (46.8%) at the end of the 2-year follow-up (table 1). Specifically, the anti-AcOrn antibodies were slightly