Table 1.

	Evolution at last observation.
MMRC, available data, n	
- Stable	(76,5%)
- Improvement	(20,6%)
- worse	(2,9%)
FVC, available data, n	
- Stable	(70,3%)
- Improvement	(12,9%)
- Worse	(16,8%)
DLCO, available data, n	
- Stable	(71,6%)
- Improvement	(18,2%)
-worse	(10,2%)
HRCT, available data, n	
- Stable	(21%)
- Improvement	(20%)
- worse	(21%)

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AB0320

FATIGUE PATTERNS IN RHEUMATOID ARTHRITIS PATIENTSWHO RECEIVE BIOLOGICAL AND TARGETED SYNTHETIC DISEASE-MODIFYING ANTIRHEUMATIC DRUGS

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Background: Fatigue is one of the most frequent symptoms in patients with rheumatoid arthritis (RA), affecting more than 80% of them. The experience of fatigue is multidimensional.

Objectives: To identify the factors associated with fatigue on its different subscales (Physical, Living, Cognitive and Emotional).

Methods: Cross-sectional study. 60 patients were included, they were being followed up in the rheumatology outpatient clinic of Hospital Clínico San Carlos, Madrid, Spain. Data were collected between July 2018 and January 2019. All patients met the ACR/EULAR 2010 criteria and they were in treatment with Biological or Targeted Synthetic DMARD. **Main variable:** Fatigue was assessed by the Bristol Rheumatoid Arthritis Fatigue Multidimensional Questionnaire (BRAFM-DQ). **Covariables:** Demographic, clinical and treatment. **Statistical analysis.** A descriptive analysis was carried out for the different variables. To identify factors independently associated to BRAFM-DQ and its subscales, multivariable linear regression was applied. Results were expressed as coef with their corresponding 95% CI. A value of $p < 0.05$ was accepted as statistically significant.

Results: A total of 60 patients, comprising of 53 females (88%) and 7 males (12%) with a mean age of 56.4 ± 11.8 years and mean disease duration of 14.1 ± 7.7 years were evaluated. RF was positive in 60% of patients. 65% were in active on work and 23% retired. Regarding comorbidities, 43% had dyslipidemia, 42% hypertension, 17% hypothyroidism and 15% depression. The DAS28-ESR and SDAI scores of the patients were 2.6 ± 0.8 , 8.5 ± 5.9 respectively. The HAQ was 0.86 ± 7.7 . The rest of the clinical, treatment characteristics, and the scores of the fatigue instruments are shown in **Table 1**. The factors affecting the BRAFM-DQ and its subscales was evaluated in multivariate analyze **Table 2**. Our results shows a correlation between disability and the different dimensions ($p < 0.001$). Patients who reported good sleep quality had less physical fatigue, while those under Non Anti-TNF treatment perceived more physical and living fatigue. In addition, an association was observed between depression and cognitive fatigue, disease activity (DAS28-ESR) and living fatigue and between VAS-pain score and emotional fatigue. A positive RF was associated with less physical and living.

Conclusion: It is important to evaluate fatigue in a multidimensional perspective, each of the different subscales could be modulated by different factors. The results of our study indicated that disability predicts in all subscales of fatigue, however, other factors can configure different patterns of fatigue in RA patients, and identify them is key to the approach of this complex symptom.

Table 1. Characteristics of the sample

Glucocorticoids mg/day, mean $\pm$ SD	4.8 $\pm$ 1.6
Treatment, n (%)	47 (78.3)
Conventional DMARDs	40 (66.6)
Anti TNF	16 (26.6)
Non-Anti TNF	4 (6.6)
Synthetic target DMARDs	
VAS pain mean $\pm$ SD	39.3 $\pm$ 24.2
Sleep quality self-report, n (%)	23 (39.6)
Good	35 (60.3)
Poor	
BRAFM-DQ (0-70), mean $\pm$ SD	21.9 $\pm$ 15.0
Physical (0-22)	10.6 $\pm$ 5.4
Living (0-21)	5.08 $\pm$ 5.0
Cognitive (0-15)	3.3 $\pm$ 3.3
Emotional (0-12)	2.9 $\pm$ 2.7

Table 2. Multivariate analyses of BRAF-MDQ and its subscales. * $p < 0.001$, ** $p < 0.05$. Cells represent beta coefficients with standard error

	Physical	Living	Cognitive	Emotional
Age	-0.10 (0.04)**	0.00 (0.04)	-0.00 (0.03)	0.04 (0.02)
Sex	-2.65 (1.70)	-0.74 (1.64)	-1.93 (1.26)	-1.21 (0.97)
RF positive	-3.80 (1.15)**	-2.85 (1.13)**		
HAQ $\geq$ 1.1	4.76 (1.14)*	4.05 (1.13)*	1.83 (0.90)**	1.91 (0.70) **
Non Anti-TNF	3.33 (1.18)**	2.60 (1.23)**		
VAS Pain				0.02 (0.01)**
DAS28-ESR		1.75 (0.65)**		
Depression			3.10 (1.19)**	
Good Sleep quality	-2.75 (1.10)**			

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AB0321 MORTALITY AND COMPLICATION OF PATIENTS WITH RHEUMATOID ARTHRITIS ADMITTED TO INTENSIVE CARE UNIT IN KYUSHU UNIVERSITY HOSPITAL

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Background: The patients with rheumatoid arthritis (RA) are associated with high mortality caused by comorbidity and complication, and are often required the intensive treatment. Severe infections are among the most common causes of their mortality in intensive care unit (ICU)^(1,2).

Objectives: To determine prognostic factors and mortality in patients with RA, including juvenile idiopathic arthritis (JIA), admitted to the ICU in Kyushu University Hospital, we examined the treatments of RA and JIA, comorbidities, complications, the reasons admitted to the ICU, intensive treatments, mortalities within 30 days, 90 days, and a year.

Methods: Between January 2008 and March 2018, 70 patients (20 males, 50 females) with RA (68) or JIA (2) staying at the ICU of our institution for 48 hours and over were included in this study. The admission to the ICU were performed total 77 of times because 5 patients were readmitted. The average of age and RA duration at the admission was 65.8 $\pm$ 17.7 years (5-96) and 13.5 $\pm$ 14.8 years (0-61), respectively, and the average of follow-up duration was 879.9 $\pm$ 992.0 days (3-3988).

Results: The mortality within 30 and 90 days were 21.4% (15/70) and 27.1% (19/70), respectively, and 24 of 65 patients (36.9%), excluded 5 patients due to the change of hospital, were dead within a year. The reasons for ICU admission included cardiovascular complications (22.9%), infection (30.0%), neurological complications (7.1%), respiratory problem (15.7%), gastrointestinal problems (4.3%), endocrinological cause (2.9%), liver problems (7.1%), kidney problems (4.3%), and others (5.7%). The average of ICU length of stay was 7.2 $\pm$ 7.6 days (2-39). The group of 30 days mortality was significantly higher in the amount of prednisone (8.1 $\pm$ 5.8 vs 4.5 $\pm$ 4.9), Charlson Comorbidity Index3 (5.1 $\pm$ 2.5 vs 2.7 $\pm$ 1.4), and APACHEII4 (21.7 $\pm$ 9.2 vs 14.5 $\pm$ 5.5) scores. The fatal outcomes within 30 days was mainly caused by infection (46.7%). In blood data, the low levels of platelet number, total protein, and albumin, and the high levels of creatinine and prothrombin time international normalize ratio at the time of admission of ICU were significantly poorer prognoses.

Conclusion: Our study has shown the high mortality of RA patients admitted to the ICU, and some blood data could be predicted poor prognosis.

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AB0322

BIOMASS SMOKE EXPOSURE LINKED TO HIGHER ACPA LEVELS IN MEXICAN-MESTIZO RA-PATIENTS

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Background: Rheumatoid arthritis (RA) is a chronic, inflammatory, autoimmune disease of the joints. Current classification criteria for RA diagnosis requires the presence of either rheumatoid factor (RF) or anti-citrullinated protein antibodies (ACPA). These have also been linked to chronic air pollutants exposure, such as tobacco smoke and biomass fuel smoke. Patients with COPD and biomass exposure have higher levels of ACPA (1). Nearly 50% of the world's population still rely on biomass fuels for cooking, heating and industry, especially in low-income countries (2).

Objectives: To investigate the prevalence of biomass exposure in a cohort of Mexican-mestizo RA-subjects, and the effect of it in their RF and ACPA levels.

Methods: A cross-sectional, observational trial with RA-subjects that fulfilled the 2010 ACR/EULAR classification criteria, recruited at a rheumatology clinic in northeastern Mexico. Patient evaluation included a complete clinical history, somatometry, and blood samples to measure hs-CRP, RF isotypes (IgA, IgG, IgM) and ACPA. Biomass exposure was documented using the biomass exposure index (BEI), defined as: average hours exposed per day multiplied by years of exposure. Descriptive analysis was done using frequencies (%) and median values (q25-q75). Subjects were divided into 3 groups according to their BEI: non-exposed, BEI <30 and BEI >30. Comparisons were done by Chi-square and Kruskal-Wallis test and correlation by Spearman's rho test.

Results: A total of 285 subjects were included, 154 (54%) of them had history of exposure. Comparisons are shown in Table 1. A significant difference in age was found ($p=0.006$), this being caused by a difference between the BEI=0 and BEI >30 groups ($p<0.001$). We also found a higher prevalence of dyslipidemia and hypertension in subjects with a BEI >30 ($p<0.05$). A significant correlation between a rising BEI and a higher value of ACPA ($\rho=0.14$, $p=0.016$) was found; this correlation was not found with any subtype of RF ($p>0.05$).

Table 1. Demographic and clinical characteristics of RA according to BEI groups.

	BEI = 0	BEI < 30	BEI > 30	p value
Age, years, median (q25-q75)	54 (47.9-59.3)	55 (49.2-61.4)	58.2 (51.8-65.4)	NS
Women, n (%)	120 (92.3)	72 (91.1)	71 (94.7)	NS
BEI, hours/year (median, q25-q75)	0 (0-0)	15 (2-19)	72 (42-160)	<0.001
Dyslipidemia, n (%)	32 (24.8)	19 (24.4)	33 (44.0)	0.011
Type 2 diabetes, n (%)	18 (13.7)	9 (11.4)	15 (20.0)	NS
Hypertension, n (%)	32 (24.4)	21 (26.6)	33 (44.0)	0.007
Body mass index, kg/m ² , median (q25-q75)	27.66 (25.07-31.6)	27.25 (24.32-31.6)	27.83 (25.52-31.2)	NS
Disease Duration, years, median (q25-q75)	9.03 (3.4-15.03)	9.5 (4.01-14)	9.04 (3.6-15.6)	NS
DAS 28-CRP, median (q25-q75)	3.17 (1.9-4.1)	3.38 (2.2-4.3)	3.39 (2.07-4.5)	NS
Negative ACPA, n (%)	46 (38.3)	20 (25.3)	20 (27.8)	NS
Group 1 ACPA, n (%)	26 (21.7)	19 (24.1)	14 (19.4)	NS
Group 2 ACPA, n (%)	31 (25.8)	21 (26.6)	18 (25.0)	NS
Group 3 ACPA, n (%)	17 (14.2)	19 (24.1)	20 (27.8)	0.016

Conclusion: In our cohort of Mexican-mestizo RA subjects, 54% had positive biomass exposure. Subjects with a BEI >30 were older and had a higher prevalence of dyslipidemia and hypertension. A significant correlation was found between higher BEI index and a higher value of ACPA antibodies.