assessed by High-resolution computed Tomography (HRCT). Statistical analyses were performed using SPSS 20.0. The *t*-test was employed to compare means of continuous variables, whereas chi-square test was used to compare frequencies. Variables that were significantly associated with ILD using univariate analyses, were included in multivariate logistic regression model. Statistical significance was considered if $p < 0.05$.

Results: The majority (89.2%) of patients were female. Mean age was 52.6 ± 12.53 years and disease duration was 11.2 ± 9.3 years. A total of 48 (16.7%) patients were noted to have respiratory symptomatology. Lung involvement was documented in 189 (65.6%) patients. In each compartment of the lung, abnormal HRCT findings suggestive of ILD were detected in 134 (70.8%) cases, bronchiectasis in 37 (19.5%) and then pleural effusion in 11 (5.8%) (Table 1).

Table 1. Frequency of subtype's pleuropulmonary involvement detected on HRTC (n=189)

Lung abnormal types N (%)	Lung abnormal Sub-types N (%)	N (%)
Interstitial lung disease 134 (70.8%)	Usual interstitial pneumonia	113(59.7%)
	Non-specific interstitial pneumonia	23(12.1%)
	Cryptogenic organizing pneumonia	3(1.5%)
	Acute interstitial pneumonia/diffuse alveolar damage	0(0%)
	Fibrosis	18(9.5%)
Airways respiratory disease 50(26.4%)	Bronchiectasis	37(19.5%)
	Follicular bronchiolitis	10(5.2%)
	Obstructive bronchiolitis	2(1.05%)
Pleural damage 20(10.5%)	Effusion	11(5.8%)
	Pleural thickening Nodules	6(3.17) 3(1.5%)

In multivariate analysis, ILD was associated with male older age (OR=1.43, 95% IC [1.202-1.952], $p=0.037$), advanced age at RA onset (OR=2.17, 95% IC [1.151-1.874], $p=0.007$), extra-articular manifestations (OR=10.8, 95% IC [5.312-12.300], $p<0.001$), disease activity (OR=2.68, 95% IC [1.463-1.715], $p<0.001$) and low methotrexate dose (OR=1.03, 95% IC [1.003-1.106], $p=0.031$).

Conclusion: ILD was the most prevalent manifestation of RA lung involvement, it was associated to male gender, older age active and severe RA.

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AB0204

A NEW INFLAMMATORY MARKER ASSOCIATED WITH DISEASE ACTIVITY IN PATIENTS WITH RHEUMATOID ARTHRITIS: PLATELET TO ALBUMIN RATIO

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Background: Rheumatoid arthritis (RA) is an inflammatory autoimmune disease characterized by disordered immunity and dysregulated cytokine. Neutrophil to lymphocyte ratio (NLR) and platelet to lymphocyte ratio (PLR) have been defined as inflammatory markers to evaluate disease activity of RA. Recently, platelet to albumin ratio (PAR) was reported as a new prognostic index in patients with cancer. However, similar studies have not been displayed in RA.

Objectives: This study was to explore the role of PAR in RA and its association with disease activity.

Methods: This retrospective study enrolled 136 RA patients and 87 age- and gender-matched healthy controls. Neutrophil, lymphocyte, monocyte, platelet, hemoglobin, albumin, NLR, neutrophil to hemoglobin ratio (NHR), neutrophil to albumin ratio (NAR), monocyte to lymphocyte ratio (MLR), monocyte to hemoglobin ratio (MHR), monocyte to albumin ratio (MAR), PLR, platelet to hemoglobin ratio (PHR), PAR, C-reactive protein (CRP), erythrocyte sedimentation rate (ESR) and Disease Activity Score of 28 joints - ESR (DAS28-ESR) were detected. Receiver operation characteristic (ROC) curve was used to discriminate RA patients from healthy individuals. Relationships between PAR and DAS28-ESR as well as other laboratory data were measured by the Spearman's correlations analysis.

Results: RA patients showed higher levels of NLR, NHR, NAR, MLR, MHR, MAR, PLR, PHR PAR and lower levels of albumin than healthy controls. PAR and

other inflammatory parameters were also raised along with increased disease activity in RA patients ($P < 0.05$) except NHR ($P = 0.098$). Similarly, albumin was decreased in RA patients as the disease activity increased ($P = 0.001$). ROC showed that area under curve (AUC) of PAR (0.887, 95%CI: 0.843-0.931) was higher than NLR (0.818, 95%CI: 0.762-0.874), NHR(0.839, 95%CI: 0.787-0.890), NAR(0.829, 95%CI: 0.776-0.882), MLR (0.794, 95%CI: 0.734-0.854), MHR(0.817, 95%CI: 0.760-0.874), MAR(0.814, 95%CI: 0.757-0.872), PLR (0.832, 95%CI: 0.779-0.886), PHR(0.884, 95%CI: 0.838-0.930) and albumin(0.860, 95%CI: 0.813-0.908). Besides, PAR was positively correlated with DAS28-ESR ($r = 0.429$, $P < 0.001$), CRP ($r = 0.540$, $P < 0.001$) and ESR ($r = 0.492$, $P < 0.001$), yielding a highest relevance than other inflammatory indexes.

Conclusion: This study demonstrated that PAR was elevated in RA patients and increased with the disease activity. PAR may be a novel marker to assess the disease activity of RA patients.

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AB0205

PREDICTORS OF ULTRASOUND DETECTED INFLAMMATORY FINDINGS IN PATIENTS WITH INFLAMMATORY ARTHRALGIA

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Background: Patients with inflammatory arthralgia (IA) are considered to be at increased risk for progression to RA. US has shown high sensitivity to detect synovitis compared with physical examination. Thus, US is recommended to identify subclinical synovitis in patients without clinical signs of inflammation.

Objectives: The objective of our study is to determine the frequency and pattern of US detected inflammatory findings in patients with IA and investigate factors contributing to predict these findings.

Methods: An US clinic is scheduled in an academic center running three days every week. A retrospective analysis of our US unit cohort during a period of 6 months was undertaken. Patients with IA and no previous diagnosis of inflammatory arthropathies were included for analysis. Inclusion criteria of IA definition included: severe symptoms presenting in the morning, duration of morning stiffness ≥ 60 min, symptoms predominantly located in MCP joints and absence of clinically detected synovitis by the referral rheumatologist. The following routinely collected variables were included in the analysis: demographics, clinical features and laboratory tests. Patients underwent bilateral US examination in GS and PD mode of hands and/or feet according to the European League Against Rheumatism (EULAR) guidelines. The presence of synovitis, tenosynovitis and enthesitis was assessed on a semi quantitative scale (0-3) for Grey Scale(GS)/Power Doppler(PD) or using enthesitis OMERACT definition, respectively. Patients were stratified in two groups based on the presence of US inflammatory findings (synovitis, tenosynovitis or enthesitis with PD signal). First, differences between groups were tested using chi-squared and Student-t tests in the univariate analysis. Second, multivariate logistic regression models were employed to investigate the association between possible predictive factors of US detected inflammatory findings.

Results: A total of 57 patients were included in the analysis. Mean age was 55.8 ± 15.2 years, 41 (71.9%) were females, and mean symptoms duration was 11.4 ± 10.4 months (Table 1). A total of 42 (73.7%) patients presented with a polyarticular arthralgia pattern. US inflammatory findings were present in 20 (35.1%) patients (26.3% PD synovitis, 21.1% PD tenosynovitis and 3.5% PD enthesitis). Hands were most commonly involved with PD synovitis at wrists in 19.3% and at MCP in 12.3% of patients (Table 2). For PD tenosynovitis, the flexor MCP 2-5 (5.3%) and compartment IV tenosynovitis (1.8 %) were the most frequent affected locations. Only two patients had PD enthesitis at feet and 6 (10.5%) had erosions in hands or feet at baseline examination. In the univariate analysis, the higher ESR values and the shorter time from symptoms onset were significantly associated with US detected inflammatory findings ($p=0.044$ and 0.049, respectively). In the multivariate analysis, only ESR values (OR=1.04; 95%CI 1.002-1.078), remained significantly associated with the presence of US inflammatory findings (Table 3).

Table 3. Independent predictors of US detected inflammatory findings

	p	Odds ratio	95% C.I.	
			Lower	Upper
ESR (mm/h)	0.039	1.04	1.002	1.078
Time (months) from symptoms onset	0.1	0.924	0.841	1.015

	Total n= 57	US inflammatory findings n= 20	Non-US inflammatory findings n=37	p
Age	55.8 ± 15.2	53.9±14.5	59.5±16.2	0.2
Sex	41 (71.9%)	13 (65%)	28 (75.7%)	0.3
Smoking	27 (47.4%)	10 (55.6%)	17 (50%)	
n= 52	20 (35.1%)	6 (33.6%)	14 (41.2%)	0.8
Smoker	5 (8.8%)	2 (11.1%)	3 (8.8%)	
Former smoker	7 (12.3%)	3 (15%)	4 (10.8%)	
Monocuticular	8 (14%)	5 (25%)	3 (8.1%)	0.9
Extension	42 (73.7%)	12 (60%)	30 (81.1%)	
Polycuticular	11.4 ± 10.4	7.3±6.2	13.5±11.5	0.049
Time (months) from symptoms onset	19.1 ± 21	29.3±28.4	14.5±14.8	0.044
ESR (mm/h)	0.6 ± 1.4	1.1±1.9	0.4±0.9	0.15
CRP (mg/dL) n=47	64.3 ± 321.6	21±53.7	88.5±399.7	0.5
RF (IU/mL) n=53	52.2 ± 231.4	104.8±360.5	22.3±103.6	0.2
CCP (IU/mL)				

Table 1. Baseline characteristics of patients with IA

Conclusion: PD US inflammatory findings are found in 1 over 3 patients with IA being PD synovitis the most common finding, specially at the wrists and MCP joints. Higher ESR values were significantly associated with the presence of US inflammatory findings. Our data highlights how the use of PD US may be useful to detect subclinical synovitis in patients with IA.

	US synovitis	PD positive
Hands	14 (24.6%)	11 (9.3%)
Wrist	14 (24.6%)	11 (9.3%)
MCP	7 (12.3%)	7 (12.3%)
PIP	1 (1.8%)	0 (0%)
Feet	8 (14%)	4 (7%)
Ankle	4 (7%)	3 (5.2%)
Tarsal joints	1 (1.8%)	1 (1.8%)
MTP	3 (5.3%)	0 (0%)
	US tenosynovitis	PD positive
Hands	4 (7%)	3 (5.3%)
2nd, 3rd, 4th or 5th flexor	3 (5.3%)	3 (5.3%)
4th extensor	1 (1.8%)	1 (1.8%)
6th extensor	0 (0%)	0 (0%)
Feet	1 (1.8%)	1 (1.8%)
Tibialis anterior	0 (0%)	0 (0%)
Posterior tibialis	1 (1.8%)	1 (1.8%)
Peroneus	0 (0%)	0 (0%)
	US enthesitis	PD positive
Feet	2 (3.5%)	2 (3.5%)
Achilles	2 (3.5%)	2 (3.5%)
Plantar Fascia	1 (1.8%)	0 (0%)

Table 2. US findings of patients with IA

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AB0206

CIRCULATING CENTROMERE PROTEIN F AUTOANTIBODIES FOR PREDICTING CLINICAL RESPONSE TO INFliximab IN RHEUMATOID ARTHRITIS

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Background: One third of patients with rheumatoid arthritis (RA) respond poorly to TNF inhibitors and related studies are inconsistent in predictive biomarkers. The identification of biomarkers that predict the treatment response prior to drug exposure is a current priority on the RA field. ACPA and RF are ubiquitously tested in RA patients, but other autoantibodies exist and may provide additional information on RA treatment response.

Objectives: This study aimed to identify circulating autoantibodies for predicting response to infliximab (IFX) in RA.

Methods: We profiled the autoantibody repertoire of baseline sera from 155 biologic naïve RA patients treated with IFX. The sera were provided by three independent clinical sources and distributed in one exploratory cohort (N=20) collected from Hospital Clínico Universitario de Santiago de Compostela (Spain), one replication cohort (N=61) collected from Hospital Universitario de A Coruña (Spain) and samples from the Swedish FarmacoTherapy (SWEFOT) trial (Sweden) (N=74) for clinical validation. The presence of autoantibodies and their levels in serum were analysed in association with EULAR clinical response at 6 months follow-up: good response (GR, N=56), moderate (MR, N=55) and non-response (NR, N=44). A suspension bead array platform built on protein fragments within Human Protein Atlas and selected from an initial untargeted screening using an array containing 42000 antigens was employed to identify the IgG and IgA autoantibodies on the exploratory cohort. A replication and validation phases were carried out on the other two serum sample cohorts. Meta-analysis and Receiver Operating Curves were performed in order to assess the clinical relevance of the findings observed.

Results: Meta-analysis revealed that the levels in serum of IgG autoantibodies against Centromere protein F (CENPF) are significantly increased in responders (good responders and moderate responders; N=111) to IFX compared to non-responders (N=44) (P=0.018). CENPF is a proliferation-associated and cell cycle-dependent centromere autoantigen that might be involved in the increased or abnormal cell proliferation that occurs during RA process. The combination of the anti-CENPF antibodies with clinical variables (age, sex, DAS28-ESR) resulted in the best model to discriminate the patients that will respond to IFX, showing an AUC of 0.756 (95% CI [0.639-0.874], P=0.001).

Conclusion: High serum levels of IgG anti-CENPF antibodies might be potentially useful to identify RA patients more likely to benefit from IFX

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AB0207

CLINICAL IMPACT OF ANTI-CARP ANTIBODIES IN RHEUMATOID ARTHRITIS

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Background: Antibodies directed against carbamylated proteins (anti-CarP) have been recently introduced for the first time as a new biomarker in rheumatoid arthritis (RA) (1). Their presence is predictive for the development of RA (2). Anti-CarP antibodies are associated with the development of more severe forms of the disease in overall and anti-citrullinated peptide antibodies negative