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ABSTRACTS

# PANLAR ABSTRACTS 2024

## Featured e-Posters



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Congress of Rheumatology .  
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## PANLAR 2024

### Systemic lupus erythematosus

#### PANLAR2024-1011

### Autoimmune Hemolytic Anemia And Immune Thrombocytopenia In A Cohort Of Patients With Systemic Lupus Erythematosus From An Argentinian

#### University Hospital

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#### Has this paper been previously presented at another conference?: Yes

**Background/Objectives:** Immune thrombocytopenia (ITP) occurs in 10-40% of patients. It is classified as moderate with platelet counts  $<50,000/\mu\text{L}$  and severe with platelet counts  $<30,000/\mu\text{L}$ . Severe ITP is associated with increased disease activity, **autoimmune hemolytic anemia (AIHA)**, kidney involvement, and neurological complications. AIHA has a prevalence of 5-10%. It is severe with hemoglobin levels  $\leq 7.5$  mg/dL. It is associated with kidney involvement, seizures, and serositis. Both ITP and AIHA have been associated with damage and mortality in some studies. The objective of our study was to describe the prevalence of ITP and AIHA and the characteristics of the population.

**Methods:** Retrospective, descriptive, cross-sectional study of patients with SLE who were followed at our center between 06/2013 and 01/2023. Patients were included if they met the ACR/EULAR 2019 criteria for SLE and had a history of ITP/AIHA at the time of diagnosis, before diagnosis, or during disease progression. Demographic, clinical, serological, disease activity (SLEDAI-2K), and treatment data were analyzed.

**Results:** Of 469 patients with SLE, the prevalence of ITP/AIHA was 22%. 89% of patients were women, with a mean age at SLE diagnosis of  $30.5 \pm 15$  years. The mean disease duration was  $13.6 \pm 8.29$  years. 78.4% of patients had ITP/AIHA at SLE onset. 52 of 102 patients (51%) had AIHA, of which 22 (21.6%) were severe. 72 of 102 patients (71%) developed thrombocytopenia, with moderate and severe values in 35%. The mean SLEDAI-2K score at the time of hematologic manifestation was  $8 \pm 5$ . 47% of patients had positive anti-DNA antibodies and 63% had hypocomplementemia. Nearly 99% of patients received oral corticosteroids, most commonly in combination with hydroxychloroquine (94%) and azathioprine (26.5%). Half of the patients had lupus nephritis, of which 38% was class III-IV. Only 6 patients developed end-stage renal disease. Other associated manifestations included mucocutaneous and articular (65%), serositis (28%), and neurolupus (19%). 87% of patients achieved remission, with 18.6% relapsing. Thirteen percent were refractory to treatment, unable to achieve low-dose corticosteroids. Only 2.9% died as a result of the hematologic manifestation.

#### Image 1:

**Table 1: Clinical Characteristics of 102 Patients with AIHA/ITP**

Characteristic	Number (Percentage)
<b>Prevalence of AIHA/ITP</b>	22% (102/469)
<b>Age at diagnosis of SLE</b>	30.5 (15) years
<b>Sex</b>	Female: 91 (89%)
<b>Duration of SLE</b>	13.6 (8.2) years
<b>ANA <math>\geq</math> 1/80</b>	102 (100%)
<b>ENAs</b>	
anti-Ro/SSA	36 (35.3%)
anti-La/SSB	19 (18.6%)
anti-SM	36 (35.3%)
anti-RNP	23 (22.5%)
anti-DNA:	48 (47%)
<b>Hypocomplementemia</b>	
C3	59 (57.8%)
C4	65 (63.7%)
<b>Clinical Characteristics</b>	
* Alopecia	*76 (74.5%)
* Acute cutaneous lupus	* 67 (65.7%)
* Arthralgias/arthritis	* 66 (64.7%)
* Lupus nephritis	* 51 (50%)
Class III-IV	38 (37.6%)
Class II-VI	12 (11.7%)
Class VI	2 (1.9%)
NTI	1 (0.98%)
ESRD	6 (5.9%)
* Serositis	* 28 (27.7%)
* Neuropsychiatric	* 19 (18.6%)
* Thrombotic SAF	* 15 (14.7%)
* Pulmonary involvement:	* 8 (7.8%)
* Obstetric SAF	* 7 (6.8%)
* Gastrointestinal	* 3 (2.9%)
* Cardiac	*1 (0.98%)
<b>SLEDAI 2K at the time of hematologic manifestation</b>	8 (5)

Image 2:



Table 2: Hematologic Manifestations, Treatments Received, and Outcomes

Characteristic	Number (%)
<b>Development of the Manifestation:</b>	
Prior to SLE Diagnosis	11 (10.8%)
At SLE Onset	80 (78.4%)
After SLE Diagnosis	11 (10.8%)
<b>AHAI</b>	
Total	52 (51%)
Severe (Hb < 7.5 g/dL)	22 (21%)
<b>Plaquetopenia</b>	
Total	72 (70.6%)
* Mild (> 50,000-< 100,000)	* 38 (37.2%)
* Moderate (> 30,000-< 49,900)	* 16 (16.7%)
* Severe (< 29,900)	* 20 (19.6%)
<b>Evans Syndrome (AHAI+PI)</b>	13 (12.7%)
<b>Treatments Received for Hematologic Manifestation:</b>	
Hydroxychloroquine	96 (94%)
Intravenous Corticosteroids	44 (43%)
Oral Corticosteroids	101 (99%)
Cyclophosphamide	9 (8.8%)
Rituximab	14 (13.7%)
Mycophenolate	8 (7.8%)
Azathioprine	27 (26.5%)
Belimumab	1 (0.98%)
Intravenous Immunoglobulin (IVIg)	16 (15.7%)
Plasmapheresis	2 (1.96%)
Splenectomy	3 (2.9%)
Thrombopoietin Receptor Agonists (TPO-RA)	3 (2.9%)
<b>Hospitalization</b>	52 (51%)
<b>Intensive Care Unit Admission</b>	7 (6.8%)
<b>Outcome:</b>	
Remission	88 (87%)
Relapse	19 (18.6%)
Refractoriness	13 (12.7%)
Death	3 (2.9%)



**Conclusion:** Our prevalence of ITP/AIHA was similar to that reported in other series of patients with SLE. Severe ITP/AIHA occurred in 5% of our cohort. Although 50% of patients had kidney involvement, only 6% developed end-stage renal disease. The vast majority of patients achieved remission.

**Reference 1:** Alonso González L., Predictors of severe hemolytic anemia and its impact on major outcomes in systemic lupus erythematosus: Data from a multiethnic Latin American cohort. *Lupus* 2023, Vol. 32(5)658–667

**Reference 2:** Fernández M., Systemic Lupus Erythematosus in a Multiethnic US Cohort XLIII. The Significance of Thrombocytopenia as a Prognostic Factor. LUMINA Study Group. *Arthritis & rheumatism* Vol56, No 2, Feb 2007, 614–621

**Disclosure of Interest:** None Declared

**Keywords:** hemolytic anemia, immune thrombocytopenia, Lupus

## PANLAR 2024

### Vasculitis and related diseases

#### PANLAR2024-1013

### Effectiveness Of Methotrexate And Leflunomide As Corticoid-Sparing Drugs In Patients With Polymyalgia

#### Rheumatica

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#### Has this paper been previously presented at another conference?: No

**Background/Objectives:** The need for glucocorticoid sparing drugs (GCSD) remains an important issue and is an unmet need in the treatment of polymyalgia rheumatica (PMR). We therefore assessed the effectiveness and safety of methotrexate (MTX) and of leflunomide (LEF) in daily clinical practice in PMR patients from Argentina.

**Methods:** A multicenter and observational study (medical records review) of PMR patients seen between 2007 and 2023, who had at least three months of follow-up after starting a GCSD, either MTX or LEF, was performed. Results are expressed as medians and interquartile ranges [25th–75th (IQR)] for continuous variables and percentages for categorical ones. The two treatments groups were compared using  $\chi^2$  test for categorical variables, Mann-Whitney U test for continuous variables and the log-rank test for time-to-event data. Crude and adjusted odds ratios (ORs) with 95% confidence intervals (CIs) were calculated using logistic regression. In all cases, a p value <0.05 was considered statistically significant.

**Results:** One-hundred and eighty-six patients (79% female) with a median age of 72 years (IQR, 65–77 years) were included. One-hundred and forty-three patients (77%) were prescribed MTX (15, IQR 10-15) and 43 (23%) LEF (20 mg, fixed dose). Flare-ups (relapses and recurrences) occurred in 17 patients (9%) and were comparable between both groups. Persistent GCSD intake was observed in 145 patients (78%). Glucocorticoid (GC) withdrawal was achieved in 67

of these 145 patients (46%) and this occurred more frequently in the LEF group ( $p = 0.001$ ). Furthermore, time until prednisone discontinuation was shorter in the LEF-treated patients (4.7 months, IQR 3-20 on LEF versus 31.8 months, IQR 10-82 on MTX,  $p = 0.000$ ). Remission was found more frequently in the LEF group ( $p = 0.003$ ). In the multivariate analysis, the probability of remission was higher with LEF therapy (adjusted odds ratio [OR] 2.96, 95% CI = 1.29-6.78,  $p = 0.004$ ).

**Conclusion:** This is the first study to demonstrate the clinical effectiveness of LEF and even its superiority in achieving remission when compared to MTX as GCSD in PMR patients. *Further research is needed to support these findings.*

**Disclosure of Interest:** None Declared

**Keywords:** Leflunomide, Methotrexate, Polymyalgia Rheumatica

## PANLAR 2024

### Systemic lupus erythematosus

#### PANLAR2024-1018

### Lupus Nephritis And Risk Of Preeclampsia In Hispanic/Latin Pregnant Patients With Systemic Lupus Erythematosus. Systematic Literature Review And Meta-Analysis

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#### Has this paper been previously presented at another conference?: No

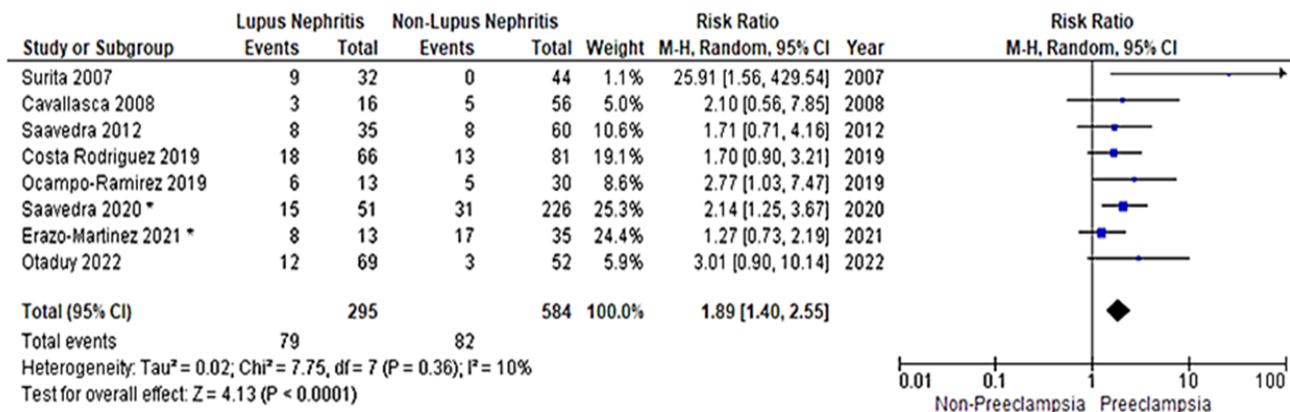
**Background/Objectives:** Worldwide, women are at higher risk of developing systemic lupus erythematosus (SLE) than men, and diagnoses often occur during the childbearing years. Hispanic/Latin (H/L) women with SLE are at increased risk for complications during pregnancy, including preeclampsia. Studies predominantly focus on Western European and Caucasian populations, with few studies in the H/L population. This study aims to make a systematic literature overview of the association between lupus nephritis (LN) and the development of preeclampsia in pregnant women with SLE in Latin America.

**Methods:** This systematic review, following PRISMA guidelines, included articles from PubMed, LILACS, SciELO, and the Virtual Health Library until December 2022. The PubMed search included countries individually combined with the MeSH terms "systemic lupus erythematosus" and "pregnancy". No language, time period, or publication type restrictions were applied. Cohort and case-control studies with original data that adhered to the 2019 EULAR/ACR guidelines were included. Meta-analyses using relative risk (RR) and a random-effects model assessed LN and pre-eclampsia. The Mantel-Haenszel method (RevMan 5.4.1) was used to calculate the overall effect estimate with a 95% confidence interval.

**Results:** 44 articles were included, 12 of which were dependent on other cohorts. There were 3998 patients with an average age of 28 years. Of these patients, 1776 were pregnant women with SLE, contributing to the analysis of 2190 pregnancies related to SLE. Of the 44 articles, 18 focused on outcomes related to LN during pregnancy. 8 articles focused on pre-eclampsia, prompting a meta-analysis for deeper insights. The pooled data showed that pregnant SLE women with LN had an increased risk of pre-eclampsia (RR=1.89; 95% CI 1.40-2.55) compared with those SLE women without LN (Figure 1). Sensitivity analyses consistently supported these findings. Visual inspection of the funnel plot showed a symmetric distribution of articles, suggesting low publication bias.

#### Image 1:

**Figure 1. Forest plot of the risk for preeclampsia in SLE pregnant women with lupus nephritis compared to SLE pregnant women without lupus nephritis**



This forest plot summarizes studies on preeclampsia events in pregnant women with SLE, comparing those with and without LN. X-axis numbers show relative risks. Blue boxes indicate effect size and sample size, with black lines as 95% confidence intervals. The overall result is represented by a diamond at the bottom. CI: Confidence Interval; df: degree freedom; Chi<sup>2</sup>: chi-squared test; I<sup>2</sup>: Higgins heterogeneity test; M-H: Mantel-Haenszel method.

\* Studies that reported patients without specifying the number of pregnancies.

**Conclusion:** Pregnant H/L SLE women with LN have a higher risk of pre-eclampsia compared to H/L SLE women without LN. Therefore, it is crucial to provide comprehensive preconception counseling to H/L women with SLE. In case of pregnancy, strict monitoring plans should be established to detect LN early and promote maternal-fetal well-being.

**Disclosure of Interest:** None Declared

**Keywords:** lupus nephritis, Preeclampsia, Pregnancy

## PANLAR 2024

### Infections (including COVID-19)

#### PANLAR2024-1024

### Impact Of Methotrexate Suspension On The Immunogenicity Of Covid-19 Vaccines In Patients With Rheumatoid Arthritis

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#### Has this paper been previously presented at another conference?: Yes

**Background/Objectives:** Some authors have demonstrated positive results on COVID-19 vaccines immunogenicity when interrupting MTX immediately after the vaccine application. The aim of this study was to assess the effect of MTX suspension after COVID-19 vaccination on humoral and T-cell responses.

**Methods:** The SAR-CoVAC-RI registry is an observational registry, which included adult patients with rheumatoid arthritis (RA), who received the first two doses of SARS-CoV-2 vaccination according to the national strategic vaccination plan between April 28 and July 2, 2021. Patients receiving treatment with MTX were selected. Anti-SARS-CoV-2 IgG antibodies (ELISA-COVIDAR) were evaluated between 21 and 40 days after the first and second vaccine application and its neutralizing activity and specific T-cell response (IFN- $\gamma$  ELISpot) after the second one.

**Results:** 19 patients were included. At the time of vaccination, median MTX dose was 15 mg/week (Q1, Q3 15.0, 20.0) and 7 (36.8%) were using glucocorticoids (Table 1). Homologous vaccination schedules with viral vector vaccines were the most frequently used. After the first dose, 63.2% presented anti-SARS-CoV-2 IgG, reaching 100% after the second one. Additionally, 89.5% presented neutralizing activity and 87.5% had a specific T-cell response.

Twelve patients (63.2%) discontinued MTX at least 7 days after the first vaccine. These patients presented anti-SARS-CoV-2 IgG numerically more frequently (reactive test 75.0% vs 42.9%,  $p=0.326$ ) and higher absorbance values after the 1st dose (median 0.1, Q1, Q3 0.0, 0.3 vs median -0.1, Q1, Q3 -0.2, 0.2,  $p=0.227$ ) when compared to those who did not discontinued MTX. In relation to the second dose, 13 patients (68.4%) suspended MTX at least 7 days after vaccination. Discontinuation of MTX at both doses occurred in 57.9% (11/19) of the patients. These patients presented slightly higher absorbance values (median 1.3, Q1, Q3 0.9, 1.6 vs median 1.0, Q1, Q3 0.5, 1.3,  $p=0.442$ ) and neutralizing antibody titers (median 1/64, Q1, Q3 1/20, 1/224 vs median 1/32, Q1, Q3 1/8, 1/160,  $p=0.588$ ). A total of 82% and 63% of the patients in each group developed a specific T-cell response ( $p=0.786$ ).

#### Image 1:

**Table 1.** Characteristics of the patients, vaccines used, and responses triggered by them

Patient	MTX dose (mg/w)	PDN dose (mg/d)	First dose vaccine	Second dose vaccine	MTX suspension after 1st dose	Days before	Days after	antiSARS-CoV-2 IgG after 1st dose	MTX suspension after 2nd dose	Days before	Days after	antiSARS-CoV-2 IgG after 2nd dose
1	15	-	Gam-COVID-Vac	Gam-COVID-Vac	YES	0	7	R	YES	0	7	R
2	15	-	Gam-COVID-Vac	Gam-COVID-Vac	NO			R	NO			R
3	15	-	BBIBP-CorV	BBIBP-CorV	NO			R	NO			R
4	20	5	Gam-COVID-Vac	ChAdOx1 nCoV-19	YES	2	7	NR	YES	0	7	R
5	20	-	ChAdOx1 nCoV-19	ChAdOx1 nCoV-19	NO			NR	NO			R
6	20	-	ChAdOx1 nCoV-19	ChAdOx1 nCoV-19	NO			NR	NO			R
7	15	10	Gam-COVID-Vac	Gam-COVID-Vac	NO			NR	NO			R
8	25	5	ChAdOx1 nCoV-19	ChAdOx1 nCoV-19	YES	0	7	R	YES	0	7	R
9	15	10	Gam-COVID-Vac	ARNm-1273	YES	7	7	R	NO			R
10	15	-	Gam-COVID-Vac	ARNm-1273	NO			R	YES	7	14	R
11	10	-	Gam-COVID-Vac	ARNm-1273	YES	0	7	R	YES	0	14	R
12	25	2.5	Gam-COVID-Vac	ARNm-1273	YES	0	7	R	YES	0	10	R
13	15	-	Gam-COVID-Vac	Gam-COVID-Vac	YES	7	7	R	YES	0	7	R
14	15	-	Gam-COVID-Vac	ARNm-1273	YES	7	7	R	YES	7	7	R
15	10	-	ChAdOx1 nCoV-19	ChAdOx1 nCoV-19	YES	15	15	R	YES	7	14	R
16	20	5	ChAdOx1 nCoV-19	ChAdOx1 nCoV-19	YES	14	7	NR	YES	7	14	R
17	25	-	Gam-COVID-Vac	Gam-COVID-Vac	YES	0	14	R	YES	0	7	R
18	25	2.5	ChAdOx1 nCoV-19	ChAdOx1 nCoV-19	YES	0	7	I	YES	0	7	R
19	20	-	Gam-COVID-Vac	Gam-COVID-Vac	NO			NR	YES	7	14	R

\*MTX: methotrexate; mg: miligrams; w: week; PDN: prednisone; d: day; IgG: immunoglobuline G; R: reactive; NR: non reactive; I: indeterminate

**Conclusion:** In this cohort, all patients with RA treated with MTX developed anti-SARS-CoV-2 IgG after two doses of vaccine, nearly 90% presented neutralizing activity and a specific T cell response. Those who suspended MTX at least 7 days after the application of the first dose presented numerically better responses.

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**Keywords:** COVID-19, Methotrexate, vaccines

## PANLAR 2024

### Vasculitis and related diseases

#### PANLAR2024-1029

### Diagnosis Of Giant Cell Arteritis By 18F-Fdg Pet/Ct In Patients On Steroid Treatment: Importance Of Delayed Imaging

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**Has this paper been previously presented at another conference?: No**

**Background/Objectives:** To encourage the diagnostic value of PET in GCA patients under long-term high dose steroid treatment.

**Methods:** GCA patients according to EULAR/ACR criteria. PET was performed at baseline and at 6 months. If negative result at 60 minutes acquisition, delayed images were performed at 180 minutes. SUVmax at the liver and aortic wall to lumen ratio (corresponding to the TBR) were ascertained in both early and delayed acquisition, defining cut-offs for positivity of >1.22 and >1.26 respectively.

**Results:** 26 patients were included. Baseline PET was positive in all of them: 18 patients at 60 minutes acquisition and 8 patients after delayed images. The median dose of steroids at the time of the baseline PET was 45 mg/d (26.2-45) of prednisone - equivalent to a median exposure of 14 days (7-76.2). At 6 months PET was performed on 19 patients, with positive results in 15. Four patients died before the 6-month follow-up PET: two due to pneumonia, one due to abdominal aortic aneurysm rupture and another for unknown reasons.

**Table 1:** Characteristics of the study population

Age at diagnosis, years *	70.5 (57-88)
Sex, woman, n (%)	18 (69.2)
Comorbidities, n (%)	21 (80.7)



- Hypertension	12 (46.1)
- Diabetes	2 (7.7)
- Dyslipidaemia	9 (34.6)
- Hypothyroidism	5 (18.2)
- Hyperuricaemia	7 (7.7)
- Smoker/ex-smoker	9 (34.6)
Days between symptoms onset and GCA diagnosis *	148 (457.2)
Temporal artery biopsy, n (%)	17 (65.4)
- Positive	9 (53)
Signs and symptoms, n (%)	
- Headache	17 (65.4)
- Polymyalgia rheumatica	16 (61.5)
- Jaw claudication	9 (34.6)
- General malaise	5 (19.2)
- Scalp tenderness	4 (15.4)
- Neck pain	4 (15.4)
- Visual impairment	10 (38.5)
- Cerebrovascular accident	1 (3.8)

- Aneurysms	2 (7.7)
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\*Median (interquartile range)

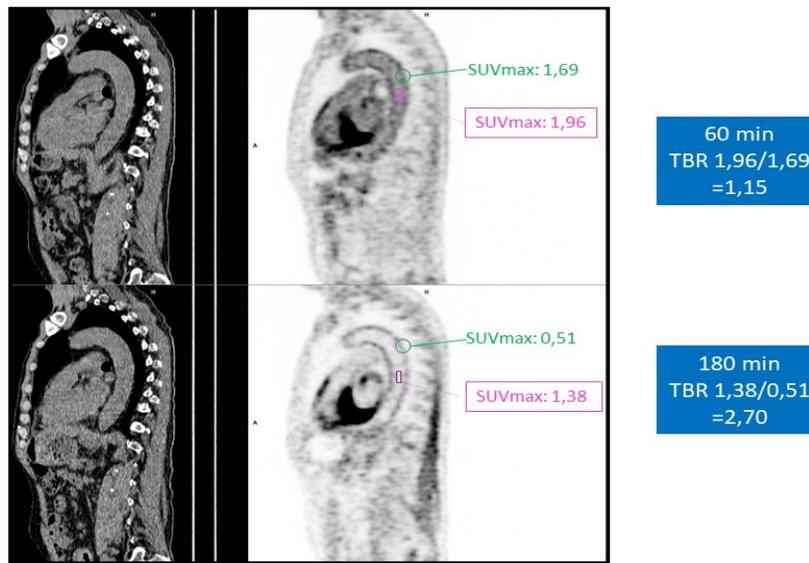
**Table 2:** Delayed F18 fluorodeoxyglucose positron emission tomography (PET)/computed tomography (CT) imaging results.

Characteristics	N = 8
Sex, female (%)	7 (87.5)
Age, years	70.7 (23)
Temporal artery biopsy positive, n (%)	4 (50)
Magnetic resonance angiography positive, n (%)	5 (60)
Computed tomography angiography positive, n (%)	5 (60)
Ultrasound positive, n (%)	6 (75)
Delayed-PET positive, n (%)	8 (100)
Glucocorticoid dose (mg/d)**	45 (40-45)
Days of delay **	19.5 (13-22)

\*\* Median (interquartile range); SD: standard deviation.

### Image 1:

**Figure 1.** Uptake of early/delayed images (target-to-background ratio: aortic wall/blood pool).



**Conclusion:** We suggest to perform PET with only one acquisition at 180 minutes in patients with high suspicion of GCA and under long-term high dose steroid treatment.

**Disclosure of Interest:** None Declared

**Keywords:** Large vessel vasculitis; Giant cell arteritis; Positron emission tomography/computed tomography (PET/CT)

## PANLAR 2024

### Infections (including COVID-19)

#### PANLAR2024-1044

### Long-Term Safety Of Vaccination For Covid-19 In Patients With Rheumatic Diseases And Psoriasis: Data From The Sar-Covac Registry

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#### Has this paper been previously presented at another conference?: Yes

**Background/Objectives:** Vaccination for COVID-19 has been widely used in our country in patients with rheumatic diseases (RD) and psoriasis (Ps); However, no randomized controlled clinical study has been performed in this population. The aim of this study was to describe the characteristics of vaccination for COVID-19 in patients with RD and Ps in Argentina and its long-term safety.

**Methods:** SAR-CoVAC is a national, longitudinal and observational registry, in which patients  $\geq 18$  years of age, with a diagnosis of RD and/or Ps, who have received at least one dose of COVID-19 vaccine, were consecutively included. For this analysis, data collected from June 2021 to May 2023 were included. Sociodemographic, clinical, therapeutic data, vaccines applied, development of adverse events (AEs), disease flares and new immune-mediated manifestations, and SARS-CoV-2 infection after vaccination and its severity were recorded.

**Results:** A total of 2264 patients were included, the majority female (78.4%) with a mean age of 56.5 years (SD 14.5). Nearly half (47.3%) had at least one comorbidity, hypertension and dyslipidemia being the most frequent. The most prevalent diseases were rheumatoid arthritis (39.0%) and osteoarthritis (16.7%). At the time of starting the vaccination regimen, 72.7% were in remission and low activity, 19.8% received glucocorticoids, 30.1% biological agents or small molecules. Regarding the primary vaccination regimen, the most frequently used vaccines were Gam-COVID-Vac, ChAdOx1 nCoV-19 and BBIBP-CorV, mostly in the form of homologous regimens (67.2%). Figure 1 shows the vaccines used according to dose.

39% of the patients reported at least one AE during any of the vaccines received, a total of 1211 AEs in 5887 doses. The most frequent were local hypersensitivity and flu-like syndrome. Mostly mild-moderate and only 8 events led to hospitalization and 2 cases of anaphylaxis were recorded. The total incidence of AEs was 20.6 events per 100 doses applied, being significantly lower for BBIBP-CorV ( $p < 0.05$ ) (Table 1). 59 cases of disease flare were identified and 2 of vaccine-associated thrombocytopenia thrombosis events. No new immune mediated manifestation was reported.

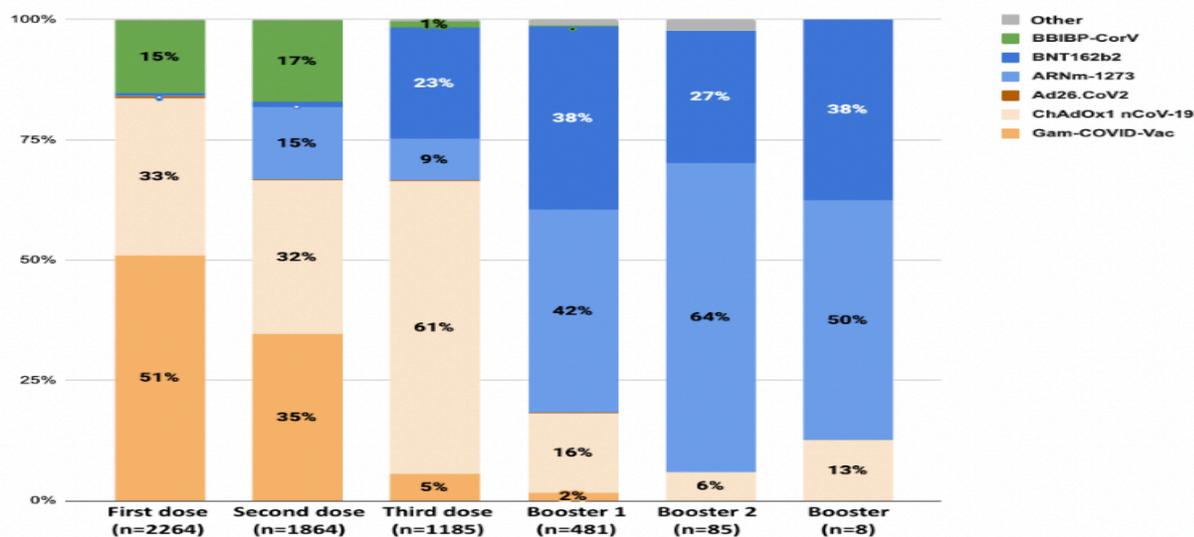
#### Image 1:

**Table 1. Incidence of AEs according to the type of vaccine used and the relative risk between them**

	Gam-COVID-Vac	ChAdOx1 nCoV-19	BBIBP-CorV	ARNm-123	BNT162b2
<b>Number of doses</b>	1846	2127	666	653	516
<b>Number of AEs</b>	327	516	67	194	104
<b>Incidence of AEs (95% CI) (every 100 doses)</b>	17.7 (16.0, 19.5)	24.2 (22.5, 26.1)	10.1 (8.0, 12.6)	29.7 (26.3, 33.3)	20.2 (16.9, 23.8)
<b>Relative risk (RR, 95% CI)(row vs column)</b>					
<b>Gam-COVID-Vac</b>		0.73 (0.61,0.85)	1.76 (1.51, 2.01)	0.59 (0.44, 0.75)	0.88 (0.68, 1.08)
<b>ChAdOx1 nCoV-19</b>			2.41 (2.17, 2.65)	0.81 (0.68, 0.96)	1.20 (1.02, 1.39)
<b>BBIBP-CorV</b>				0.34 (0.08, 0.59)	0.50 (0.21, 0.78)
<b>ARNm-123</b>					1.47 (1.27, 1.68)

**Image 2:**

**Figure 1. COVID-19 vaccines used**



**Conclusion:** In this cohort in which the COVID-19 vaccines available in our country were evaluated, they proved to be safe in patients with RD and/or Ps.

**Disclosure of Interest:** None Declared

**Keywords:** COVID-19, vaccines



## PANLAR 2024

### Infections (including COVID-19)

#### PANLAR2024-1045

### Long-Term Follow-Up Of Patients With Rheumatic Diseases And Sars-Cov-2 Infection: Data From The Sar-Covid Registry

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#### Has this paper been previously presented at another conference?: Yes

**Background/Objectives:** Patients with rheumatic diseases (RD) have a more severe SARS-CoV-2 infection and an unfavorable outcome. The aims of this study were to describe the SARS-CoV-2 infection outcomes in patients with RD and to assess the post-covid syndrome development.

**Methods:** Observational study. Patients with RD and confirmed SARS-CoV-2 infection (RT-PCR and/or positive serologies) from the SAR-COVID registry were included. The data were collected from August 2020 to June 2023. Patients with unknown outcome and/or with discordant dates in which the duration of symptoms could not be established were excluded. Post-COVID syndrome (PCS) was defined as a condition characterized by the persistence of symptoms for more than 4 weeks.

**Results:** 2707 patients were included, 81.7% female, with a mean age of 51.4 (SD15.5) years. The most common RD were rheumatoid arthritis (44.2%) and systemic lupus erythematosus (16.4%). Most patients presented symptoms (94%), the most common being fever (60.4%), cough (51.6%) and headache (40.6%). The majority (78.1%) had an outpatient course, while 6.4% had a World Health Organization ordinal scale (WHO-OS) value  $\geq 5$  and 4.0% died.

After excluding patients who died, 493/2598 (19%) PCS cases were identified. This group was older, with a greater frequency of Caucasian ethnicity and comorbidities. Likewise, symptoms such as fever, headache, cough, dyspnea, chest pain, confusion, arthromyalgia, anosmia and dysgeusia were more prevalent in this group. They were also hospitalized more frequently (35.1% vs 15.3%,  $p < 0.01$ ), the severity of COVID-19 was greater (EO-WHO $\geq 5$ ) (Figure 1) and they presented more complications, including respiratory distress syndrome (9.1 % vs 0.8%,  $p < 0.01$ ) and sepsis (2.4% vs 0.1%,  $p < 0.01$ ) (Figure 2). In the 189 patients with PCS with a 12-month follow-up, the most frequent symptoms were fatigue and dyspnea. In the multivariable analysis, the presence of some symptoms during the acute episode, including dyspnea, anosmia, chest pain, cough, fever (OR 2.96-1.57), and fibromyalgia diagnosis (OR 2.33, 95%CI 1.54, 3.48) were associated with the development of PCS.

Follow-up data was collected from 1075 patients, of whom 89 reported at least a second SARS-CoV-2 infection.

Image 1:

Figure 1. Severity of acute COVID-19 between patients who developed Post-COVID Syndrome and those who did not

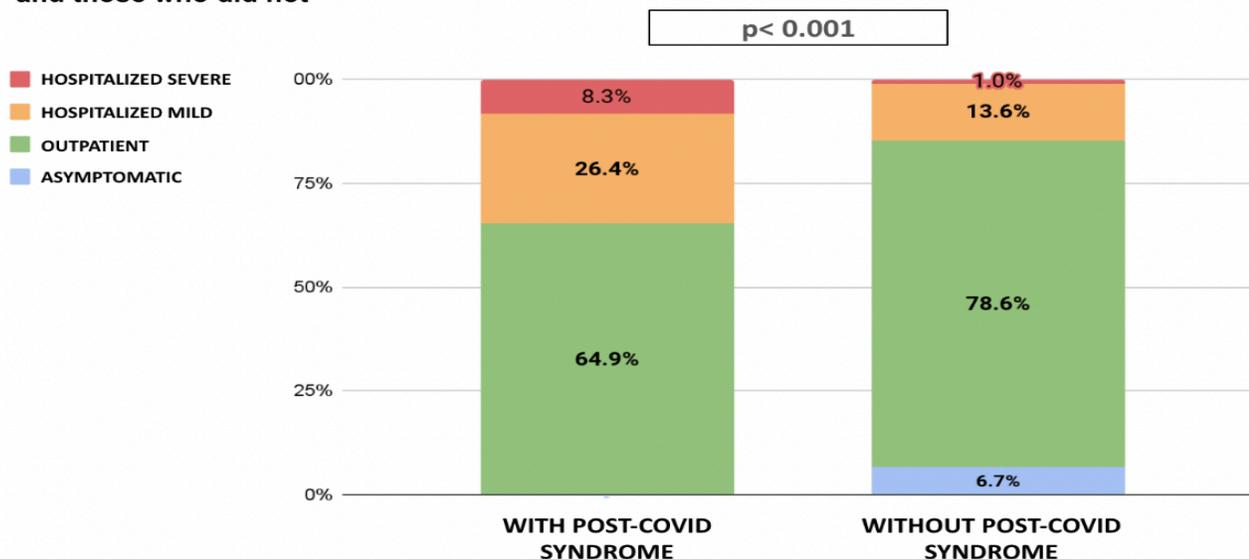
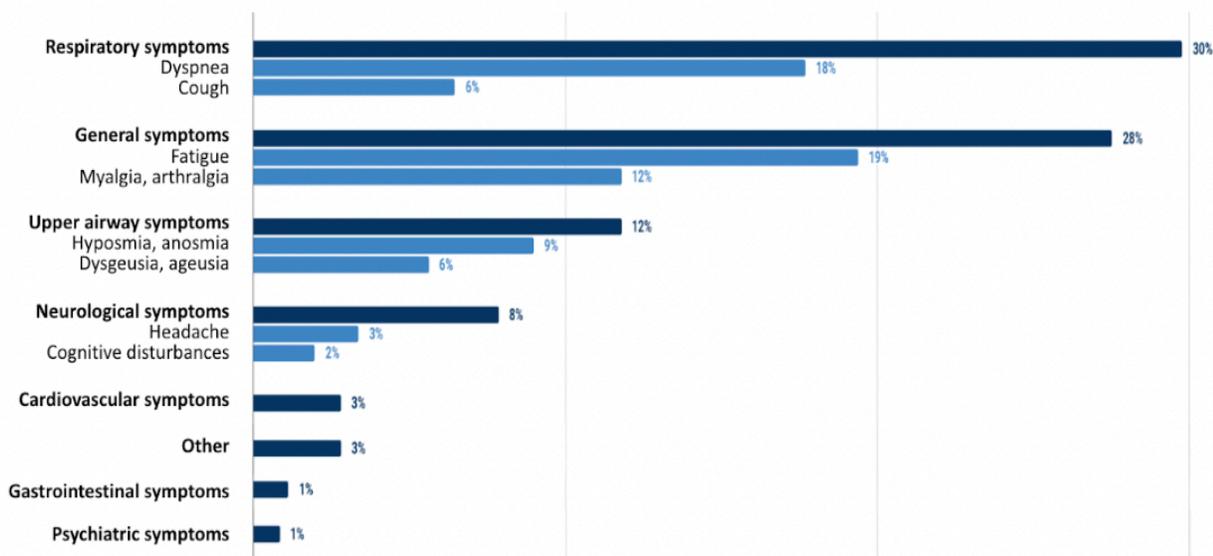


Image 2:

Figure 2. Post-COVID symptoms



**Conclusion:** In this cohort of patients with RD and confirmed SARS-CoV-2 infection, 2 out of 10 patients developed PC, with fatigue and dyspnea being the most common prolonged symptoms. Patients who presented this condition had more severe acute COVID-19.



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**Disclosure of Interest:** None Declared

**Keywords:** COVID-19

## PANLAR 2024

### Rheumatoid arthritis

#### PANLAR2024-1046

### Persistence And Safety Of Tofacitinib In Patients With Immune-Mediated Rheumatic Diseases In Argentina: Data From The National Biobadasar 3.0 Registry

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<sup>1</sup>Research Unit, <sup>2</sup>On behalf of the BIOBADASAR Registry, Argentine Society of Rheumatology, CABA, Argentina

#### Has this paper been previously presented at another conference?: Yes

**Background/Objectives:** Original tofacitinib (tofa-o) was introduced to the market in 2013 and since 2020 eight generic drugs (tofa-g) have been included in Argentina. However, there is little local data on the persistence and survival of these agents. The aim of this study was to assess the differences regarding survival, persistence and safety between tofa-o and tofa-g.

**Methods:** Analysis carried out using data from the BIOBADASAR registry, which included all patients with at least one treatment period with tofa until June 2023. For the survival analysis, each treatment period with tofacitinib was evaluated individually and then continuously, regardless of intratreatment brand substitution.

**Results:** A total of 528 patients with 583 treatment periods were included, 486 (83.4%) with tofa-o and 97 (16.6%) with tofa-g. The follow-up time for the first group was significantly longer (1271 vs 76 patient/year,  $p < 0.01$ ). The majority of patients (93.4%) had rheumatoid arthritis.

At least one adverse event (AE) was reported in 26.5% of treatment periods with tofa-o, while this occurred in 15.5% of the tofa-g periods ( $p = 0.08$ ). Total incidence of AE was significantly higher in the tofa-g group, 34.2 and 23.7 events per 100 patients/year, respectively,  $p = 0.01$ . Similarly, incidence of infections and gastrointestinal events was higher during the tofa-g periods. On the contrary, herpes zoster, cardiovascular and neoplasia events were observed only in the tofa-o periods.

During follow-up, 265 (54.5%) and 31 (32.0%) cycles were suspended in the tofa-o and tofa-g groups, respectively. In about 35% of both groups this was due to treatment failure. It should be noted that 32.1% of tofa-o periods were suspended due to loss of follow-up and 13.2% due to an AE. In contrast, almost half of the tofa-g cycles were discontinued due to nonmedical substitution (Table 1). 55 brand substitutions were recorded in 37 patients. Likewise, the survival of tofa-g was significantly lower (Fig. 1). Something similar occurred with persistence at 6, 12 and 24 months, 94.9%, 69.5%, 20.9% vs 96.3%, 92.1%, 77.9%, respectively,  $p < 0.001$ .

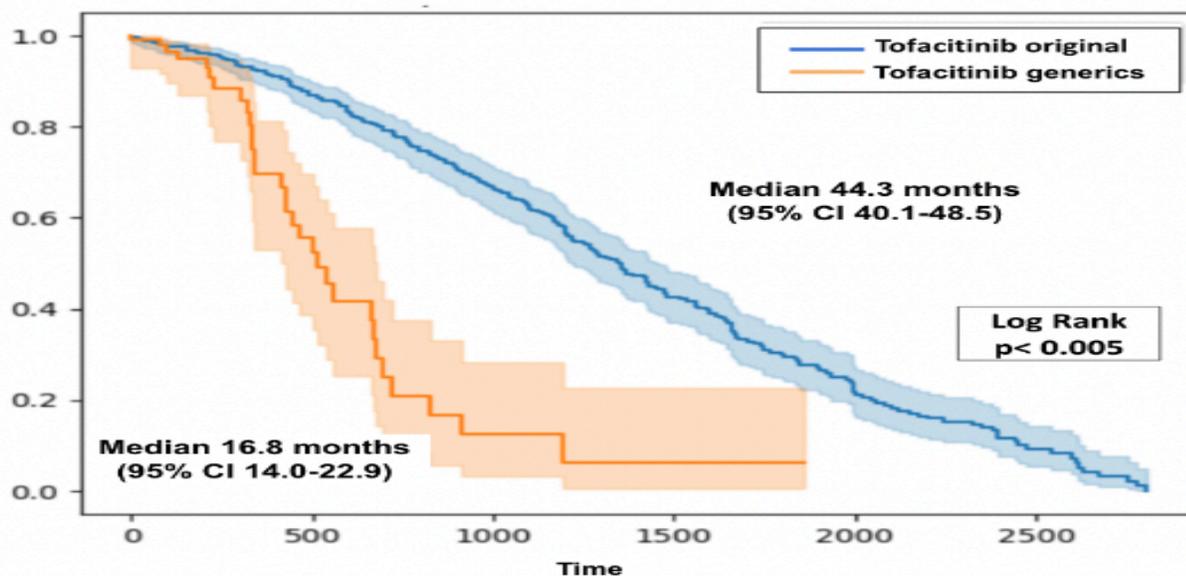
**Image 1:**

**Table 1. Discontinuation frequency and causes**

	Total (n= 583)	Tofacitinib generics (n= 97)	Tofacitinib original (n=486)	p
<b>Discontinuation, n (%)</b>	296 (50.8)	31 (32.0)	265 (54.5)	<0.001
<b>Cause of discontinuation, n (%)</b>				<0.001
Treatment failure	104 (35.1)	12 (38.7)	92 (34.7)	
Adverse event	36 (12.2)	1 (3.2)	35 (13.2)	
Pregnancy	5 (1.7)	-	5 (1.9)	
Lost of follow up	85 (28.7)	-	85 (32.1)	
Remission	3 (1.0)	-	3 (1.1)	
Non-medical substitution	24 (8.1)	15 (48.4)	9 (3.4)	
No access	19 (6.4)	2 (6.5)	17 (6.4)	
Patient decision	3 (1.0)	-	3 (1.1)	
Other	9 (3.0)	1 (3.2)	8 (3.0)	
Unknown	7 (2.4)	-	7 (2.6)	

**Image 2:**

**Figure 1. Tofacitinib original and generics survival**



**Conclusion:** In this national cohort of patients treated with tofacitinib, the incidence of AEs was higher in periods with generic agents. Drug survival and persistence was lower in this group, with automatic substitution by health coverage being the main cause of discontinuation.



**Disclosure of Interest:** C. Isnardi Grant / Research support with: BIOBADASAR is supported by Pfizer. An unrestricted grant was obtain. , M. J. Haye Salinas: None Declared, A. Brigante: None Declared, M. J. Gamba: None Declared, E. Velozo: None Declared, G. Berbotto: None Declared, M. De La Sota: None Declared, I. Exeni: None Declared, N. Alvarado: None Declared, G. Gómez: None Declared, G. Gómez: None Declared, V. Saurit: None Declared, E. R. Catay: None Declared, G. Medina: None Declared, G. Citera: None Declared, K. Kirmayr: None Declared, J. M. Dapeña: None Declared, D. Guaglianone: None Declared, M. S. Larraudé: None Declared, A. Secco: None Declared, N. Aste: None Declared, B. Pons-Estel: None Declared, G. Bovea: None Declared, G. N. Rodriguez: None Declared, M. A. García: None Declared, C. Pisoni: None Declared, C. Gobbi: None Declared, I. Strusberg: None Declared, E. Cavillón: None Declared, V. Savio: None Declared, A. P. Álvarez: None Declared, G. Casado: None Declared, M. C. De La Vega: None Declared, G. Pons-Estel: None Declared

**Keywords:** jak inhibitors, tofacitinib

## PANLAR 2024

### Systemic lupus erythematosus

#### PANLAR2024-1050

### Diffuse Alveolar Hemorrhage In Latin American Patients With Systemic Lupus Erythematosus: A Case-Control Study

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#### Has this paper been previously presented at another conference?: No

**Background/Objectives:** Although diffuse alveolar hemorrhage (DAH) is a rare complication of systemic lupus erythematosus (SLE), it is related to lower survival rates (55.6% versus 95.6%). Due to its impact on mortality, physicians must be aware of this condition in patients with respiratory symptoms. This study aimed to compare the clinical, imaging, and laboratory findings of SLE patients with and without DAH and recognize the factors associated with this pulmonary manifestation.

**Methods:** This was a retrospective, case-control study where 77 patients with SLE and DAH were matched (1:3) for sex and age with 80 non-DHA patients (controls) between January 2012 and December 202. Descriptive, comparative, and logistic regression analyses were performed.

**Results:** Of 2,479 hospitalized patients with SLE, 1.08% had DAH. Patients were mainly women (70.4%) with a mean age of 32.3 years ( $\pm$ SD 15.9) and a disease duration of 2.9 years ( $\pm$ SD 5.9). DAH was the SLE debut in almost half of the patients (44.4%), along with hematological (83.3%) and renal involvement (62.9%). Most patients with lupus nephritis had severe involvement as rapid progressive glomerulonephritis (81.3%). Cough and dyspnea were the typical symptoms; 80.6% had moderate hypoxemia (PaFiO<sub>2</sub> of 201 mmHg) and a mean hemoglobin drop of 2.3 g/dL ( $\pm$ SD 1.2). All cases received intravenous glucocorticoids, and 44.4% had a triple therapy with cyclophosphamide and plasma exchange. By bivariate analysis, the presence of photosensitivity, alopecia, arthritis, hemolytic anemia, glomerulonephritis, serositis, leukopenia, lymphopenia, thrombocytopenia, higher anti-dsDNA levels, ureic nitrogen, C reactive protein and higher hospital stay were factors independently associated with the occurrence of DAH in SLE patients, on the other side higher lymphocytes count, hemoglobin, and complement C3 and C4 levels were factors negatively associated with this complication. Regarding outcomes, 59.3% of the cases required mechanical ventilation, seven patients had concomitant infections, especially pneumonia, and 22.2% died after a mean of 35 days of hospitalization.

**Conclusion:** DAH is a rare, life-threatening complication in SLE patients, occurring frequently at the debut of the disease. The presence of cutaneous, articular, serosal, hematological, renal involvement, elevated levels of anti-DNA, urea nitrogen, C reactive protein, and more extended hospital stay were associated with the DAH presentation.

**Disclosure of Interest:** None Declared



**Keywords:** Diffuse alveolar hemorrhage, systemic lupus erythematosus, capillaritis

## PANLAR 2024

### Rheumatoid arthritis

#### PANLAR2024-1051

### Factors Influencing The Therapeutic Response Of Methotrexate Plus Leflunomide Combination In Colombian Patients With Rheumatoid Arthritis: Real-Life Evidence

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#### Has this paper been previously presented at another conference?: No

**Background/Objectives:** Leflunomide and methotrexate combination therapy could be considered in patients with refractory rheumatoid arthritis without risk factors. Nevertheless, the literature on how these factors influence the therapeutic response to the combination is scarce. This study wanted to assess the therapeutic response, factors influencing this outcome, and adverse reactions of methotrexate and leflunomide combination therapy in patients with rheumatoid arthritis, previously refractory to either methotrexate or leflunomide monotherapy.

**Methods:** This multicenter historical cohort study included patients with active rheumatoid arthritis despite previous monotherapy treatment with methotrexate or leflunomide between 2010 and 2021. The variables were recorded from the electronic medical records at the beginning of the combined therapy, at three and six months of follow-up. Disease activity and treatment response were assessed with the Disease Activity Score 28 with C-reactive protein (DAS28-CRP) and the European Alliance of Associations for Rheumatology (EULAR) response criteria. A logistic regression model was performed to identify the factors associated with clinical response.

**Results:** The study included 90 patients, 75% were female, and the mean age was 55 years. Adverse reactions occurred in 24% of the patients, and the most frequent was elevated aminotransferases levels (10%). The median DAS28-CRP were 4.0, 2.6, and 2.1 points at baseline, at three and six-month follow-up, respectively. According to EULAR response criteria, 83% of patients achieved a moderate or good response at six months. The erosive disease was identified as a risk factor for no EULAR response at three months of follow-up (OR 3.37, 95% CI 1.01-11.3, p = 0.048). However, we did not find factors influencing the therapeutic response at the six-month follow-up.

**Conclusion:** In patients with rheumatoid arthritis refractory to methotrexate or leflunomide, the combined therapy achieves an adequate clinical response with an acceptable safety profile. Patients with erosive disease represent a subgroup with a lower response to the combination therapy, who might benefit from another therapeutic option.

**Reference 1:** C.E. Toro-Gutiérrez, Á. Arbeláez-Cortés, A.R. Fernández-Aldana, R.A. Mejía-Romero, P. Méndez Patarroyo, G. Quintana L et al. Guía de práctica clínica para la detección temprana, el diagnóstico, el tratamiento y el



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seguimiento de los pacientes con artritis reumatoide. Asociación Colombiana de Reumatología, 2022. Rev ColombReumatol, 2023. <https://doi.org/10.1016/j.rcreu.2023.02.001>

**Reference 2:** R. Alfaro-Lara, H.F. Espinosa-Ortega, C.A. Arce-Salinas. Systematic review and meta-analysis of the efficacy and safety of leflunomide and methotrexate in the treatment of rheumatoid arthritis. Reumatol Clin (Engl Ed), 2019;15:133-139. <https://doi.org/10.1016/j.reuma.2017.07.020>

**Disclosure of Interest:** None Declared

**Keywords:** Leflunomide, Methotrexate, Treatment Outcome

## PANLAR 2024

### Imaging

#### PANLAR2024-1057

### Shear Wave Elastography Findings Of Posterior Tibial Tendon And Its Synovial Sheath In Tenosynovitis In Rheumatoid Arthritis

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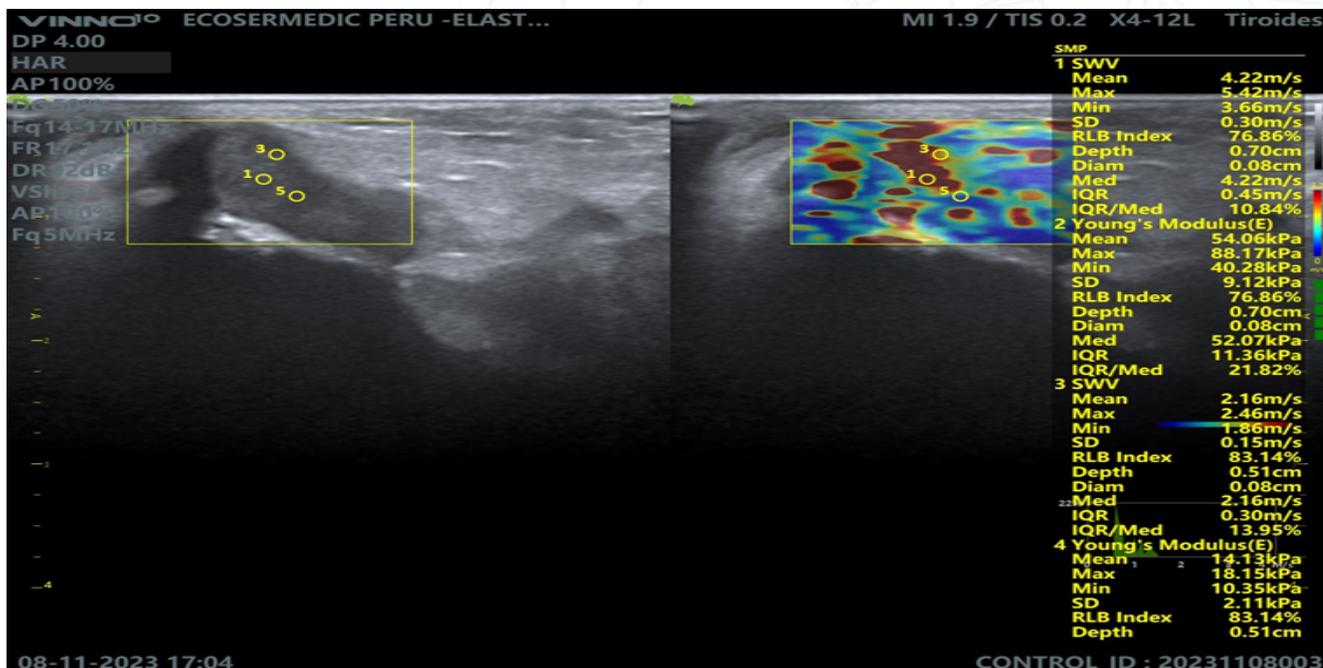
#### Has this paper been previously presented at another conference?: No

**Background/Objectives:** Objective: Our aim was to evaluate the feasibility of using shear wave electrography (SWE) to assess posterior tibial tendon and its synovial sheath elasticity and rigidity In alterations with tenosynovitis in RA.

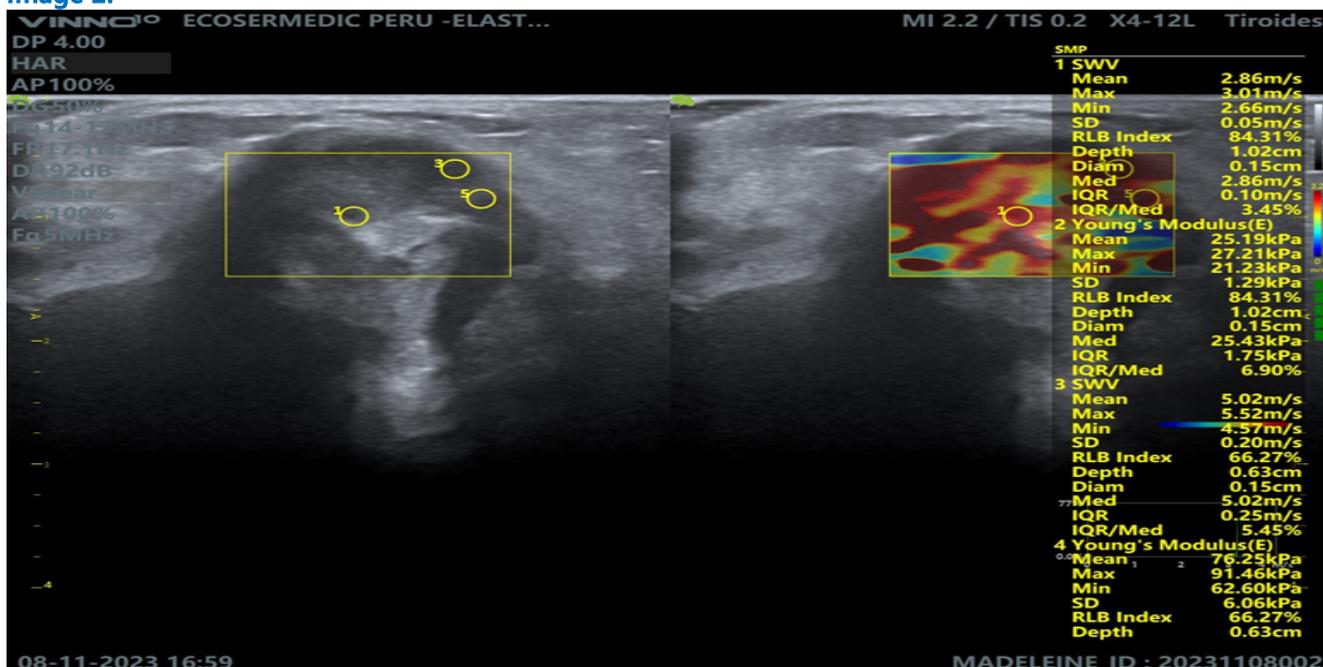
**Methods:** Materials and methods: We performed B-mode, power Doppler ultrasound and SWE to total number of 40 participants. All participants were evaluated clinically to call the diagnosis of de posterior tibial tenosynovitis or to rule out the diagnosis. We composed 2 groups. Group 1 included 20 healthy volunteers (16 females and 4 male participants with ages ranging from 24 to 50 years, median age was 27.5 years) and group 2 had 20 patient's RA posterior tibial tenosynovitis. (15 females and 5 male patients with ages ranging from 25 to 60 years, median age was 54 years). SWE measurements were repeated 3 times and arithmetic average was used for the final SWV and Young's modulus(E) value.

**Results:** Results: The median SWE value of healthy group (group 1) was SWV = 4.22 m/s DE 0.30 m/s. E = 54.06 kPa DE 9.12 kPa and posterior tibial tenosynovitis patient group (group 2) was SWV = 2,86 m/s DE 0.05 m/s. E = 25. 19 kPa DE 1.29 kPa . In synovial sheath the median SWE value of healthy group (group 1) was SWV = 5.02 m/s DE 0.20 m/s. E = 76.25 kPa DE 1.02 kPa and posterior tibial tenosynovitis patient group (group 2) was SWV = 2.16 m/s DE 0.15 m/s. E = 14.10 kPa DE 2.11 kPa Two groups demonstrated statistically significant difference (p<0.001). The ROC curve analysis was performed and the SWV of value of 40.5 kPa was calculated as a cut-off value for the diagnosis of posterior tibial tenosynovitis jn RA with 95% specificity and 85% sensitivity. In synovial sheath 94% specificity and 87% sensitivity

#### Image 1:



**Image 2:**



**Conclusion:** Conclusion: SWE modality can provide useful data regarding de posterior tibial tendon and its synovial sheath in tenosynovitis and can discriminate tissue compromise between both. Further randomized controlled studies are needed to confirm the presented cutoff values.



**Disclosure of Interest:** None Declared

**Keywords:** posterior tibial tendons, synovial sheath. tenosynovitis; elastography, shear wave

## PANLAR 2024

### Imaging

#### PANLAR2024-1060

### Beyond Imaging: The Utility And Predictive Significance Of Lung Ultrasonography In Diagnosing Interstitial Lung Disease In Rheumatoid Arthritis Patients Compared To Computed Tomography

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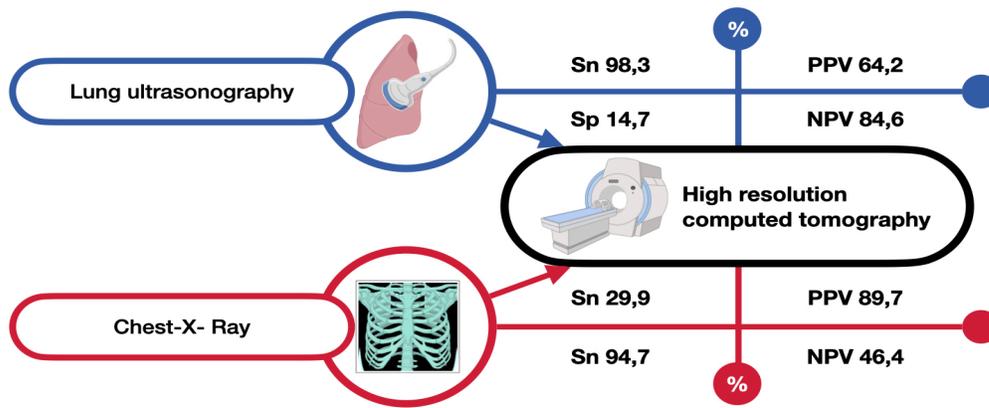
#### Has this paper been previously presented at another conference?: No

**Background/Objectives:** Rheumatoid arthritis (RA) is a systemic inflammatory disease, which compromise not only joints, also could affect other organs such as lungs. The involvement of lungs in RA is known as interstitial lung disease (ILD). Early ILD diagnosis prevents morbidity and mortality in RA, therefore, the diagnostic process of ILD should be improved. Study's aim was to assess percentage of concordance and prediction role of ultrasonography (US) and chest X-ray (CXR) regarding to high resolution computed tomography (HRCT) for the early diagnosis of ILD in RA patients.

**Methods:** A prospective cohort study was conducted. Adult RA patients were included between January 2022 to January 2023. Patients with underlying cardiopulmonary diseases were excluded. All included patients underwent to lung US (LUS), CXR, DLCO (Diffusing lung capacity for carbon monoxide) and HRCT. LUS was performed by a pulmonologist expert in ILD. Chi-square test and Fisher's exact test were used for statistical analyses of categorical variables. Kaplan Meier was used for evaluating ROC curves of every diagnostic tool.

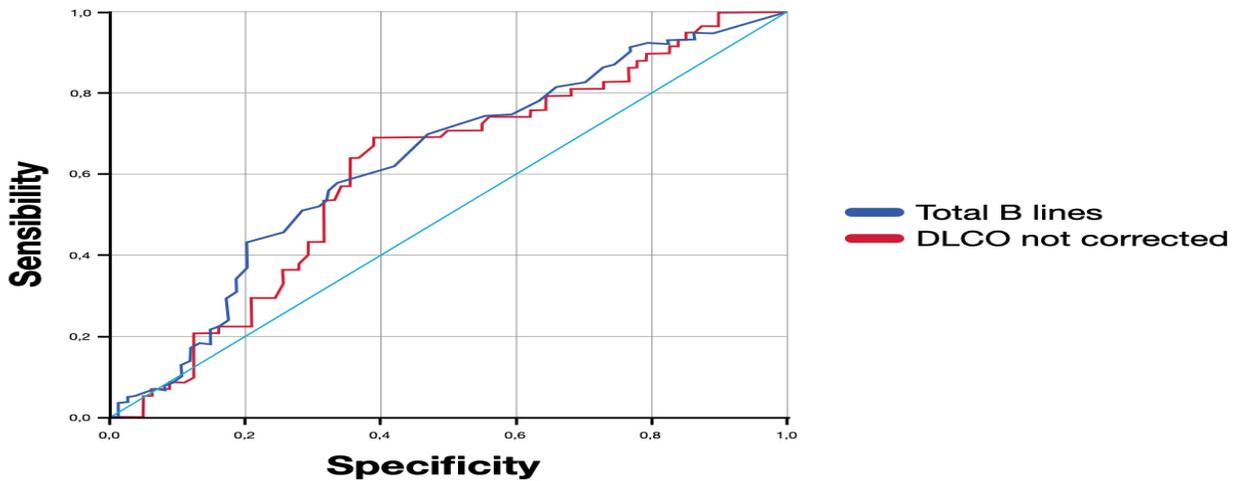
**Results:** 192 patients were included (151 were women, 69 ± 9 years old). More than 72% were seropositive for rheumatoid factor and/or anti-citrullinated antibodies. Mean disease evolution time was 16.8 ± 11.1. Disease activity by DAS28 was 2.5 ± 1.1. 64.6% patients were managed with methotrexate, 12% patients were under anti-TNFs, and 11.5% were under non-anti-TNF treatment. The sensitivity and specificity of LUS compared with HRCT was 98.3% and 14.7%, respectively. The sensitivity and specificity of the CXR with respect to HRCT were 29.9% and 94.7%, respectively (Image 1). In ROC curves, B lines number of 11.5 had the best discriminatory balance with a sensitivity of 93% (AUC 0.63; 95% CI: 0.55-0.71; p < 0.003) for the presence of ILD in the HRCT. The corrected DLCO value of 7.13 was identified with the best balance of sensitivity (69%) and false positives (39%) of ILD presence in HRCT in subjects with RA (AUC 0.61; CI 95%: 0.52-0.70, p < 0.028) (Image 2).

#### Image 1:



Sn: Sensibility; Sp: Specificity; PPV: Predictive positive value; NPV: Negative predictive value.

Image 2:



**Conclusion:** This study shows that LUS is highly sensitive tool for early detection of RA-ILD. So, it could function as a screening tool for RA-ILD. L

US and DLCO could help to predict the presence of ILD in patients with RA. However, it is important to emphasize that HRCT should be performed to confirm diagnosis and to assess disease progression.



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**Disclosure of Interest:** G.-S. Rodriguez-Vargas: None Declared, I. Möller: None Declared, E. Vicente-Rabaneda: None Declared, A. Mata: None Declared, M. F. Linares-Contreras: None Declared, S. Martinez: None Declared, L. Ibatá: None Declared, P. Rodriguez-Linares: None Declared, L. Villarreal: None Declared, N. Gutiérrez: None Declared, A. Rojas-Villarraga: None Declared, P. Santos-Moreno Grant / Research support with: Abbvie, Abbott, Biopas- UCB, Bristol, Janssen, Pfizer, Roche, Sanof, Speakers Bureau with: Abbvie, Abbott, Biopas- UCB, Bristol, Janssen, Pfizer, Roche, Sanof

**Keywords:** interstitial lung disease, rheumatoid arthritis, Ultrasound

## PANLAR 2024

### Imaging

#### PANLAR2024-1064

#### Shear Wave Elastography Role In The Evaluation Of Muscle Strength In Sarcopenia

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#### Has this paper been previously presented at another conference?: No

**Background/Objectives:** This study aimed to investigate the potential role of shear-wave elastography (SWE) in evaluating muscle quality and assess its association with muscle strength and mass.

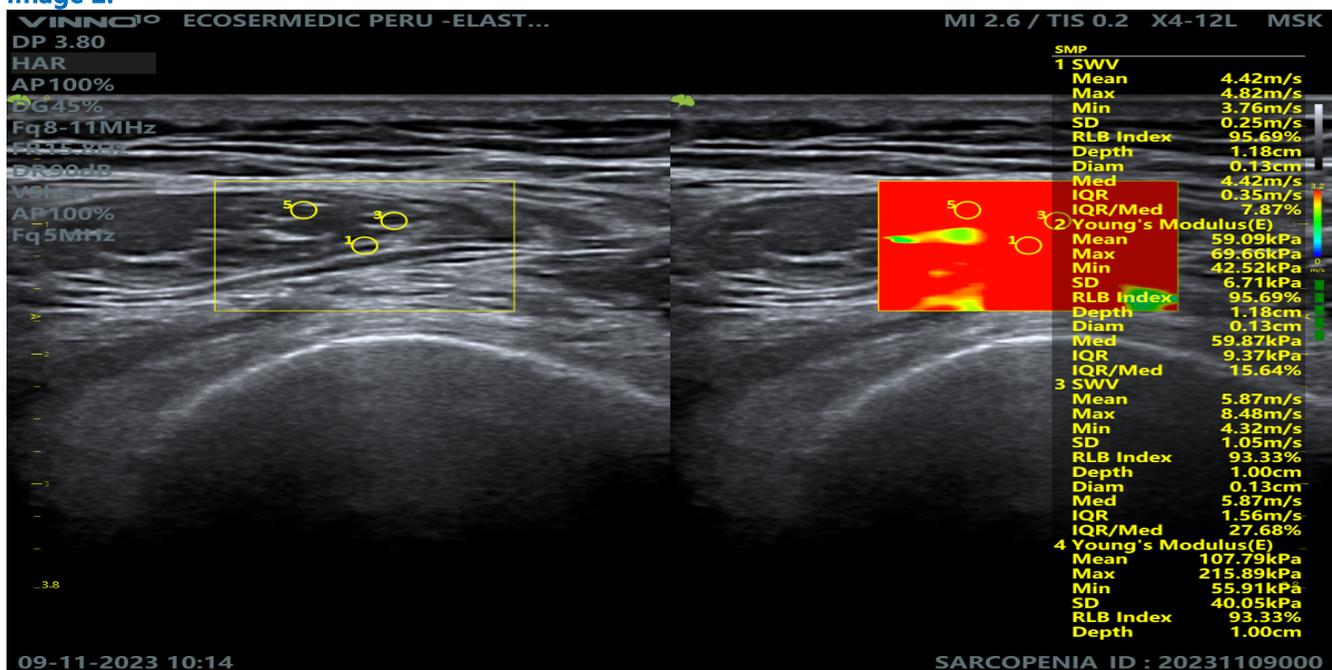
**Methods:** A total of 32 patients aged 28–85 years were included. Patients aged >65 years underwent comprehensive geriatric assessment. Anthropometric measurements, assessment of physical performance, muscle strength (handgrip strength [HGS]), muscle mass (B-mode muscle ultrasonography), and muscle quality (identified via SWE) were performed for all patients.

**Results:** The median (interquartile range) age of participants was 65 (59–76) years and 62% (n = 80) were female. According to HGS, patients were divided into normal (Group 1) and low HGS (Group 2), and there were 20 (65.9%) and 12 (34.1%) patients in each group, respectively. The median average value of SWE measurement (Vmean) of the rectus femoris (RF) in passive stretching was significantly lower in the low HGS group ( Group 1: 4.42 m/s DE 0.25 . Group 2: 2.62 m/s DE 0.20, p<0.001) Image 1,2. In regression analyses, Vmean was significantly associated with HGS independently of age, sex, and body mass index. Optimal cutoff values of the Vmean value (m/s) of RF in passive stretching for predicting low HGS were  $\leq 2.72$  for male (area under the curve [AUC], 0.831; 95% CI, 0.708–0.948; P = <0.0001), and  $\leq 2.52$  for female (AUC, 0.714; 95% CI, 0.605–0.831; P = 0.002).

#### Image 1:

Medidas							
VShear	Mean	Max.	DE	medicamento	IQR	IQR/med	Índice RLB
<b>Módulo de Young(E)-SMP</b>							
1	59.09 kPa	69.66 kPa	6.71 kPa	59.87 kPa	9.37 kPa	15.64 %	95.69 %
2	107.79 kPa	215.89 kPa	40.05 kPa	94.82 kPa	54.60 kPa	57.58 %	93.33 %
3	98.93 kPa	148.16 kPa	17.55 kPa	96.52 kPa	30.09 kPa	31.18 %	95.69 %
<b>SWV -SMP</b>							
1	4.42 m/s	4.82 m/s	0.25 m/s	4.42 m/s	0.35 m/s	7.87 %	95.69 %
2	5.87 m/s	8.48 m/s	1.05 m/s	5.87 m/s	1.56 m/s	27.68 %	93.33 %
3	5.67 m/s	7.03 m/s	0.50 m/s	5.67 m/s	0.85 m/s	15.49 %	95.69 %
<b>Nombre</b>		<b>1</b>		<b>2</b>		<b>Estadística</b>	<b>Unidad</b>
<b>SMP 2D</b>							
Area-Ellipse		1.46		0.01		0.01 <sub>Fin</sub>	cm <sup>2</sup>
Perimeter		6.55		0.41		0.41 <sub>Fin</sub>	cm
<b>MSK 2D General</b>							
Distance		0.67		0.55		0.55 <sub>Fin</sub>	cm
<b>Elemento de cálculo</b>		<b>Resultado</b>	<b>Unidad</b>	<b>Elemento de cálculo</b>	<b>Resultado</b>	<b>Unidad</b>	
<b>SMP</b>							
IQR(SWV)		0.72	m/s	Med(SWV)	5.67	m/s	
IQR/Med(SWV)		12.79	%	IQR(E)	24.35	kPa	
Med(E)		98.93	kPa	IQR/Med(E)	24.61	%	

Image 2:



**Conclusion:** This is the first study in Latin-American revealing SWE is a good predictor of muscle strength, and it could be a useful tool for evaluating muscle quality in clinical practice. Changes in muscle quality identified by shear-wave elastography and association with sarcopenia. Further randomized controlled studies are needed to confirm the presented cutoff values.



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**Disclosure of Interest:** None Declared

**Keywords:** elastography, sarcopenia

## PANLAR 2024

### Spondyloarthritis

#### PANLAR2024-1101

#### Proposed Modification Of The Asas Criteria For A More Natural Classification Of Spa.

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#### Has this paper been previously presented at another conference?: No

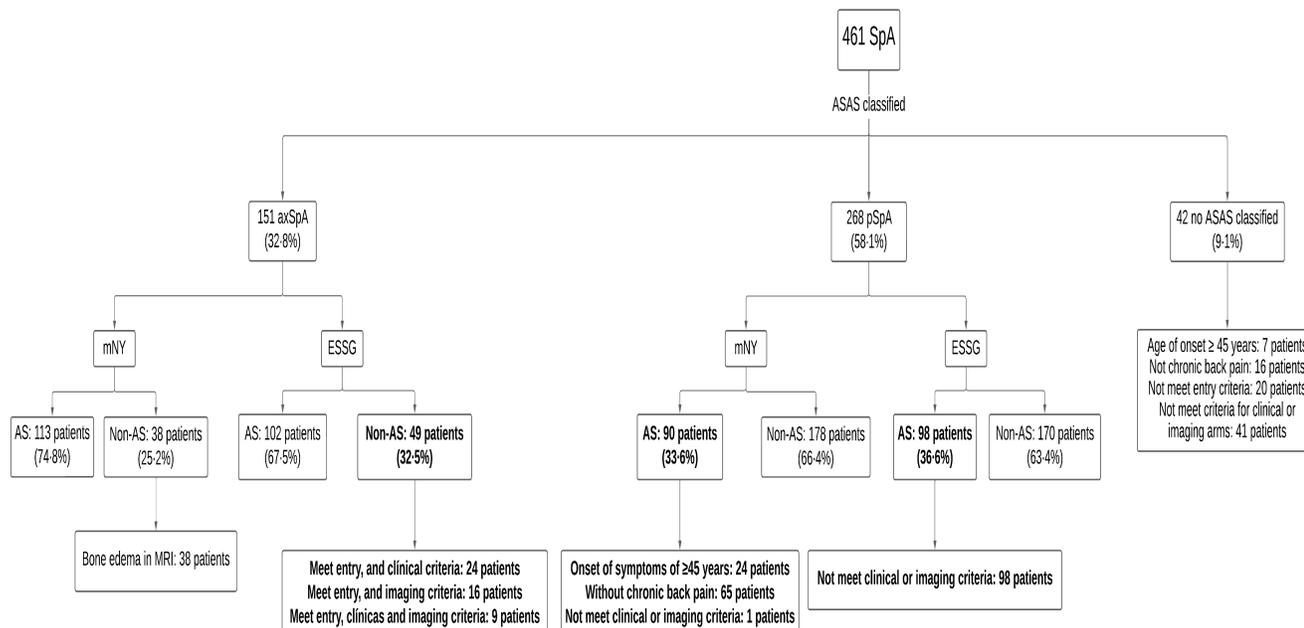
**Background/Objectives:** The Assessment of Spondyloarthritis International Society (ASAS) classification criteria are essential for epidemiological data and clinical trials. However, in specific clinical scenarios, these criteria may not be adequate because spondyloarthritis (SpA) has a fluctuating course, and only sometimes is the predominant clinical presentation clearly defined, leading to misclassification of SpA patients. The present study proposes modifying axial SpA (axSpA) criteria to address this problem.

**Methods:** The cohort was obtained from three referral institutions in Colombia from 1990 to 2015. Patients were diagnosed according to rheumatologist criteria and later were classified according to ASAS criteria. Patients who have less than three months of back pain and radiographic sacroiliitis at the time of the evaluation were allowed to be classified as axSpA if they met the other characteristics proposed by ASAS; this group of patients was called "axSpA - without chronic back pain" (axSpA-w/oCBP).

**Results:** The cohort comprised 461 SpA (GESPA cohort). According to the ASAS criteria, the peripheral SpA (pSpA) presentation was the most frequent (58.1%), followed by axial SpA (axSpA) in 32.8%. However, 9.1% of patients did not meet ASAS criteria. The graph presents in bold the patients misclassified according to the different SpA classifications, with about 33% of the pSpA with ankylosis.

Modifying the entry criteria for axSpA was made (axSpA-w/oCBP), which allowed 32.8% (88 patients) to be reclassified from pSpA to axSpA. This modification permitted axSpA to be the most frequent clinical presentation (51.8%) without modifying the number of unclassified patients (9.1%). Patients with axSpA-w/oCBP had an earlier onset of the disease, a longer delay in diagnosis, more back pain, and sacroiliitis compared to pSpA (Table). Sacroiliitis in MRI/X-ray and HLA-B27 alleles were more frequent in axSpA-w/oCBP, while the HLA-B15 allele was more frequent in pSpA. The inflammation measure by ERS was higher in axSpA-w/oCBP than in pSpA.

#### Image 1:



**Image 2:**

	SpA patients n=461	axSpA n=151	pSpA n=268	P value*	axSpA -w/o CBP n=239	pSpA <sup>m</sup> n=180	P value**
Male	303 (65.7)	101 (66.9)	176 (65.7)	0.8	155 (64.9)	122 (67.8)	0.7
Age of onset of symptoms Ç	29.4 (11.1)	26.7 (8.2)	30.6 (12.2)	<0.001	26.6 (8.5)	32.9 (13)	<0.001
Delay in diagnosis Ç	8 (10.5)	8.5 (8.9)	8 (11.4)	0.6	10.1 (12.1)	5.6 (7.4)	<0.001
History of							
Back pain	378 (82)	151 (100)	190 (70.9)	<0.001	239 (100)	102 (56.7)	<0.001
Buttock pain	195 (42.3)	73 (48.3)	103 (38.4)	0.04	117 (49)	59 (32.8)	0.001
Sacroiliac joint pain	222 (48.2)	86 (57)	114 (42.9)	0.006	135 (57)	65 (36.3)	<0.001
Sacroiliitis X-Ray	216 (46.9)	113 (74.8)	102 (38.1)	<0.001	167 (69.9)	48 (26.7)	<0.001
Sacroiliitis MRI	106 (22.1)	54 (34.4)	49 (18.2)	0.001	77 (32.2)	18 (10)	<0.001
HLA-B27	191 (41.4)	82 (54.3)	107 (39.9)	0.005	126 (52.9)	58 (32.2)	<0.001
HLA-B15	54 (11.7)	7 (4.6)	37 (13.8)	0.004	15 (6.3)	28 (15.6)	0.002
ESR mm/h	19.8 (18.4)	18.2 (18.9)	21.7 (18.8)	0.1	18.4 (17.3)	23.2 (20.6)	0.02

Data are mean (SD) or n (%). Percentages might not sum to 100% due to rounding.  
Ç Time measured in years.  
\* Comparison between axSpA and pSpA  
\*\* Comparison between axSpA – w/o CBP vs pSpA<sup>m</sup>  
axSpA-w/oCBP = axial Spondyloarthritis with modification of the entry criteria. pSpA= peripheral Spondyloarthritis. X-Ray= Conventional radiography.  
MRI: Magnetic nuclear resonance. HLA= Human Leukocyte Antigen. ESR= Erythrocyte Sedimentation Rate.

**Conclusion:** This modification improved the classification of SpA subgroups with fewer pSpA with axial involvement and inflammation, leading to better differentiation between axial and peripheral clinical presentations. This change could positively impact early treatment and significant outcomes.

**Disclosure of Interest:** None Declared



**Keywords:** ASAS criteria, Chronic back pain, Spondyloarthritis

## PANLAR 2024

### Spondyloarthritis

#### PANLAR2024-1126

#### Diagnostic Prevalence Of Axial Spondyloarthritis In Argentina (Prespax Study)

Emilce Schneeberger<sup>1</sup>, Gustavo Citera<sup>1</sup>, Enrique Soriano<sup>1</sup>, Rodrigo García Salinas<sup>1</sup>, Julieta Gentiletti<sup>1</sup>, Luis Somma<sup>1</sup>, Leandro Carlevaris<sup>1</sup>, Analía Dellepiane<sup>1</sup>, María Martire<sup>1</sup>, Diego Vila<sup>1</sup>, Belén Videla García<sup>1</sup>, Agustín García Ciccarelli<sup>1</sup>, Verónica Bellomio<sup>1</sup>, Mercedes García<sup>1</sup>, María Correa<sup>1</sup>, Hernán Maldonado Ficco<sup>1</sup>, Laura Galván<sup>1</sup>, Emma Civit<sup>1</sup>, Dora Pereira<sup>1</sup>, Edson Velozo<sup>1</sup>, Marcos Borgia<sup>1</sup>, María Martínez<sup>1</sup>, Gretel Rausch<sup>1</sup>, Osvaldo Cerda<sup>1</sup>, Mariana Espindola Echazu<sup>1</sup>, Mario Goñi<sup>1</sup>, María Elena Calvo<sup>1</sup>, José Maldonado Cocco<sup>1</sup>, Samanta Malm-Green<sup>1</sup>, Marcos Rosemffet<sup>1</sup>, María Gálvez Elkin<sup>1</sup>, Ingrid Petkovic<sup>1</sup>, Rafael Roselli<sup>1</sup>, Tomás 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**Has this paper been previously presented at another conference?: Yes**

**Background/Objectives:** We lack data on the prevalence of axial spondyloarthritis (axSpA) in our country.

To estimate the diagnostic prevalence of axSpA in Argentina, to analyze the sociodemographic and clinical characteristics of this disease and stratify these results according to the 23 provinces and the federal district.

**Methods:** All rheumatologists in the country who care for adult patients were invited to participate through an invitation by different media. Patients  $\geq 18$  years of age with a diagnosis of axSpA according to ASAS 2009 criteria and/or NYM criteria were included. Those patients who had not consulted within the previous year were contacted to verify follow-up. The period for patient inclusion was 12 months. The variables to be recorded were: socio-demographic, disease duration and diagnostic delay, type, subtype and features of axSpA and complementary studies (*HLA-B27*, x-ray and MRI of sacroiliac joints). **Statistical analysis:** The crude prevalence was calculated as the number of identified axSpA patients divided by the adult population according to the provisional data of the last National Census (5/18/22) INDEC and is expressed as a %. Descriptive and inferential statistics.

**Results:** A total of 694/781 (88.9%) rheumatologists agreed to participate in the study. Participation varied by region: from 100% to 25%. The total adult population of Argentina is 31,621,696 inhabitants; 4105 patients with axSpA were registered, corresponding to a prevalence of 0.013%. The geographical distribution of the prevalence of axSpA was from 0.036% in Tierra del Fuego to 0.002% in Jujuy. The average age of the patients was 48.7 years ( $\pm 13.9$ ) and 2395 (58.3%) were male. Their nationality was: Argentina 95.3%, border countries 2.7% and other countries 1.9%. Ethnicity: mestizo 48.7%, caucasian 41%, unknown 7.4%, native american 2.6%, and asian american 0.3%. The median disease duration of axSpA was 10 years (IQR 5-19) and the median delay to diagnosis was 2 years (IQR 1-6). 2563 patients (62.4%) were classified as radiographic axSpA. Regarding the axSpA subtypes, 59.7% were pure, juvenile 4.7%, associated with psoriatic arthritis 29%, associated with inflammatory bowel disease (IBD) 4% and reactive arthritis 2.6%. 15.3% had a family history of axSpA. Uveitis (15.9%), psoriasis (29.3%) and IBD (5.1%). *HLA-B27* was positive in 1996/3143 (63.5%).

**Conclusion:** This is the first concrete epidemiological data on the prevalence of axSpA in our country.

**Special collaboration:** Aguilar G. Image specialist.

**Disclosure of Interest:** None Declared

**Keywords:** axial spondyloarthritis, prevalence

## PANLAR 2024

### Systemic lupus erythematosus

#### PANLAR2024-1141

#### The Hidden Curriculum In Self-Management Education For Systemic Lupus Erythematosus In Latin America

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#### Has this paper been previously presented at another conference?: No

**Background/Objectives:** Achieving therapeutic goals in systemic lupus erythematosus (SLE) requires a critical process of self-management education. To gain insight into its impact on patients and to identify the hidden curriculum's elements that facilitate a holistic approach to individuals with this disease, a phenomenological approach was proposed to explore sources of information about SLE.

**Methods:** A phenomenological methodology was implemented, utilizing focus groups of 55 participants, including patients with SLE, their family members, and relatives from seven Latin American countries. The ethical standards outlined by the Declaration of Helsinki and the International Ethical Guidelines for Health-Related Research Involving Human Subjects, developed by the Council for International Organizations of Medical Sciences (CIOMS) in partnership with the World Health Organization (WHO), were considered.

**Results:** At the time of diagnosis, patients with SLE and their relatives often lacked knowledge about the disease. The primary sources of information included the Internet and healthcare professionals, while peers, groups, and patient associations provided invaluable guidance and support. The Internet offered many resources, but their quality and impact varied greatly. Notable resources included social media, such as Hablemos de Lupus, an online educational program developed as a collaboration between Emory University, GLADEL (Grupo Latino Americano De Estudio del Lupus), and Latin American lupus patients' organizations. Patients rated their rheumatologists' information as highly valuable and positively impactful. However, communication barriers were prevalent, especially with primary care physicians and non-rheumatology specialists, and instances of discursive violence and epistemic injustice were observed, causing harm to patients with SLE.

**Conclusion:** In Latin America, numerous unofficial sources of information on SLE influence patients' attitudes and decisions. These sources can provide an opportunity for an educational process that caters to the specific needs and realities of the region.

**Disclosure of Interest:** None Declared

**Keywords:** Curriculum, Lupus, Self-management

## PANLAR 2024

### Rheumatoid arthritis

#### PANLAR2024-1142

### Impact Of Titers And Decrease Of Rheumatoid Factor And Anti-Citrullinated Peptide Antibodies On Therapeutic Response In Rheumatoid Arthritis.

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#### Has this paper been previously presented at another conference?: No

**Background/Objectives:** Rheumatoid Factor (RF) and ACPA play a role in the pathophysiology of RA, a reduction in titers could be achieved with the consequent clinical benefits: immunological remission. Objectives: To estimate the decrease in RF and/or ACPA titers after one year of treatment. Evaluate baseline variables that are associated with their decrease and which ones are associated with an improvement in clinimetry at one year.

**Methods:** Prospective observational study, which included patients over 18 years of age, with a diagnosis of RA and treated with biological drugs. On the first visit, studies were carried out: laboratory (including RF and ACPA), X-ray, ultrasound, and interview where sociodemographic and clinical data were collected. Each evaluator (laboratory, imaging, and clinical) was blinded to the data from the other studies. ACPA levels were measured in titers and divided into quartiles (1:0-5, 2:5-50, 3:50-200, 4:>200). A new laboratory (FR and ACPA), clinical and treatment control was performed after one year (same evaluators).

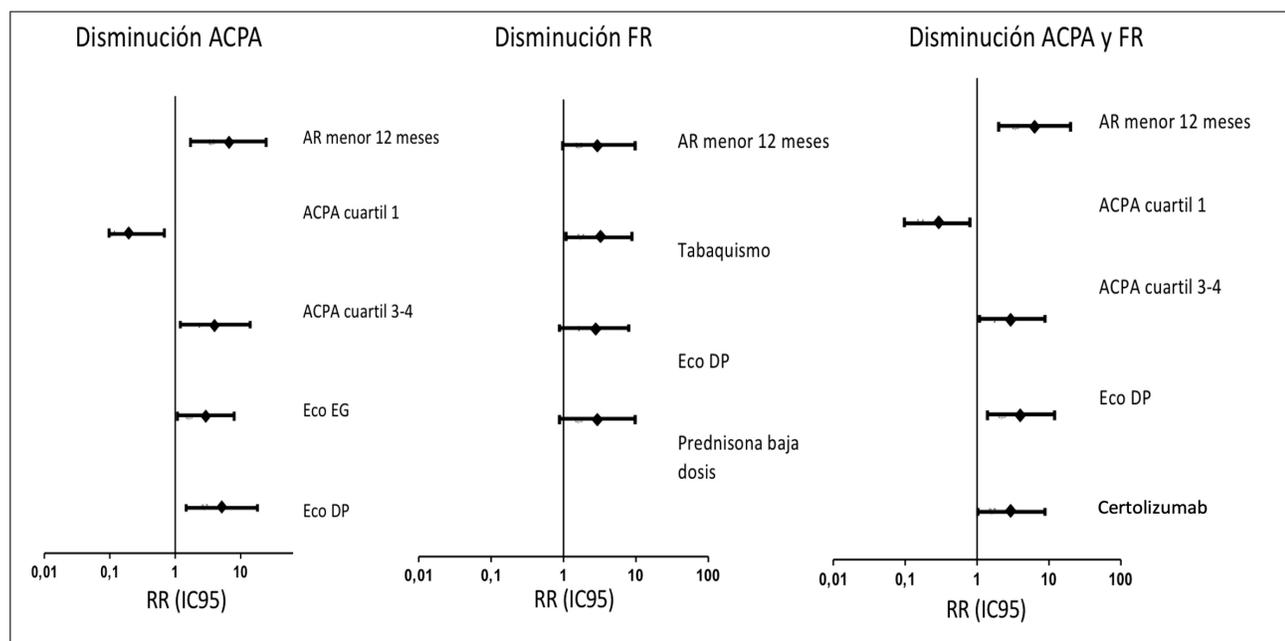
**Results:** Of the 183 RA patients who started biological treatment, 83 underwent a new review a year later. Baseline characteristics: Table 1. At one year of follow-up, 51.5% (CI:40-62) decreased ACPA titers, 50% (CI:39-61) decreased RF, and 38% (CI:28-49) both; The median decrease in titers was: 38.7 (1-190) for ACPA and 12.5 (3.6-77) for FR. The baseline variables that predicted decrease were ACPA, RF and both: fig 1. Three logistic regression models were created, predictor variables were included: for a decrease in ACPA it was associated with: diagnosis less than 12 months p 0.007 expB: 9, for FR smoking 0.04 expB: 3, and for both diagnosis less than 12 months p 0.002 expB: 10.7 and use of certolizumab p 0.022 expB: 5. The decrease in antibodies was associated with the following clinical response parameters at one year: ACPA: SDAI 7 (3-17) vs 11 (5.5-24) p 0.043, for FR: SDAI 6.1 (2.8-18) vs 10.8(6.5-25) p 0.029, CDAI 5.5 (2-17.5) vs 11 (5.7-24) p 0.036, and for both: SDAI 6 (2-17) vs 10.8 (6-25) p 0.038, CDAI 6 (2-17) vs 10.5 (6-25) p 0.032.

#### Image 1:

Table 1

Early Diag (6 months) (%)	22.7	Age (IQR)	57 (43-64)
Female (%)	83	Education (RIC)	12 (8.5-15)
FR+ (%)	68.4	Disease duration - months (IQR)	48 (12-84)
ACPA + (%)	59.2	Weight (DS)	76.4 (18.3)
Double-sero+ (%)	54	FR title (RIC)	34.5 (11.8-132)
Seronegative(%)	26.3	ACPA title (RIC)	28 (0.5-184)
CRP + (%)	27.6	Cholesterol (RIC)	185 (163-223)
Comorbidities (%)	59.2	ERS (RIC)	25 (10.5-40.7)
ILD (%)	10.5	CRP (RIC)	3 (1-7)
DMAR (%)	89.5	CDAI (DS)	14.4 (8.9)
Prednisone ≤ 10 (%)	22.4	SDAI (DS)	15, (9.3)
Prednisone > 10 (%)	4	DAS28 (DS)	3.88 (1.2)
Biological (%)	100	Certolizumab (%)	24

Image 2:



**Conclusion:** Significant proportion of patients experienced a decrease in ACPA and RF levels after one year of treatment. Baseline and therapeutic factors associated with this decrease were identified, including the use of certolizumab. Furthermore, reductions in antibodies were observed to correlate with improvements in clinical assessment.



**Disclosure of Interest:** None Declared

**Keywords:** Antibodies, rheumatoid arthritis, Treatment Outcome

## PANLAR 2024

### Psoriatic arthritis

#### PANLAR2024-1143

#### Arthralgia With Risk Of Progression To Psoriatic Arthritis In A Large Cohort Of Patients: Role Of Ultrasound.

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#### Has this paper been previously presented at another conference?: Yes

**Background/Objectives:** The psoriasis- to- psoriatic arthritis (PsA) transition offers a unique opportunity to identify individuals at increased risk of developing PsA and to implement preventive strategies. Objectives: To estimate the frequency of arthralgia with risk of progression to PsA (ARP-PsA) in a large cohort of patients and to estimate the incidence of PsA at one year in ARP-PsA patients analyzing clinical, laboratory and imaging predictor variables.

**Methods:** Prospective cohort study, include patients who were admitted consecutively for arthralgias to the "Reuma-check". In this, the baseline included: laboratory, X-rays, ultrasound (US) with power Doppler (PD) and clinical interview. Sociodemographic data, clinical and clinimetry were collected. Each evaluator were blinded to the data of the other studies. Presence of psoriasis (Pso) and family history (FH) were investigated. Patients with previous diagnosis of PsA were excluded. The ARP-PsA was defined as those patients with arthralgia plus Pso and/or FH. This group was evaluated at one year to estimate if they developed PsA. Statistical analysis: descriptive statistics, Chi2 test, Fisher's exact test, Student's T test and Mann Whitney was performed. A multivariate logistic regression: dependent variable the final diagnosis of PsA at year.

**Results:** A total of 1419 patients with arthralgia were included between 2017-2022, 8.4% (95% CI: 7-10) met ARP-PsA criteria. Of these 119 patients 34 developed PsA at 1 year (29%, 95%CI: 20-37). The clinical, laboratory and imaging characteristics between ARP-PsA patients who did and did not develop PsA are shown in table 1 (univariate analysis). Of the ARP-PsA patients who had only Pso (n 32), only family history (n 70) or both combine (n 17) developed PsA at 1 year: 57%, 11% and 53% respectively. Longer duration of psoriasis was associated with the development of PsA: median years:15 vs 3. In multivariate analysis, the predictor variables for progression from ARP-PsA to PsA at one year were: combination of Pso plus FH (OR: 32; CI 95%: 1.2-1026), synovitis by PDUS (OR: 31; CI 95%: 1.1-967), US enthesopathy findings (OR: 470; CI 95%: 13-1600) and tender joint count (OR 0.2 CI95% 0.05-0.6).

#### Image 1:

Features	ARP-PsA no PsA (85)	ARP-PsA yes PsA (34)	p	RR (95%CI)
Age (years), mean (SD)	48 (14)	49 (15)	0.9	
Female, %	78	61	0.06	0.4 (0.2-1)
Years of education, median (IQR)	14 (3)	13 (3)		
Time between the onset of symptoms and the baseline visit (months), mean (SD)	13 (30)	18 (30)	0.2	
Smoking, %	36	44	0.4	1.3 (0.6-3)
Cardiometabolic comorbidities, %	40	35	0.6	0.6 (0.3-1.8)
Family psoriasis, %	80	47	>0.001	0.2 (0.1-0.5)
Pso + Family history Pso	8	26	0.008	4 (1.3-12)
Cutaneous psoriasis, %	26	73	>0.001	8 (3-20)
Pso duration time (years) median (IQR)	3 (15)	15 (15)	0.03	
Patient global VAS (0-100), mean (SD)	50 (23)	60 (15)	0.04	
Tender joints (28), median (IQR)	2 (4)	1.5 (3)	0.05	
Arthralgia less than one year, %	38	19	0.04	0.4 (0.1-0.8)
Morning stiffness, %	16	12	0.6	0.7 (0.2-2)
Squeeze test +, %	22	31	0.3	1.5 (0.6-4)
ESR, mean (SD)	17 (13)	18 (16)	0.6	
CRP +, %	21	28	0.6	1.2 (0.8-1.7)
CRP, median (IQR)	1 (2.7)	1 (4)	0.4	
HAQ, median (IQR)	0.5 (0.8)	0.8 (0.75)	0.1	
X-ray bone erosions, %	4	26	0.004	7 (2-28)
X-ray, joint narrowing, %	25	19	0.5	7 (0.2-2)
Ultrasound synovitis, Tenosynovitis, %	8	12	0.5	1.6 (0.4-6)
Ultrasound synovitis, Gray Scale, %	5	21	0.01	5 (1.3-18)
Ultrasound synovitis, Power Doppler signal, %	1.3	12	0.01	10 (1.1-98)
Ultrasound, Enthesopathy findings, %	4	53	>0.001	25 (6.5-99)

**Conclusion:** The frequency of patients at risk of progression to PsA in our cohort was 8.4%, of whom 29% developed PsA at 1-year follow-up. The main predictor variables were US findings (synovitis and enthesopathy), as well as the combination of Pso plus FH, a lower number of tender joints, and a longer duration of the Pso.

**Disclosure of Interest:** None Declared

**Keywords:** pain, Psoriatic arthritis, Ultrasound

## PANLAR 2024

### Sjogren's and other systemic autoimmune diseases

#### PANLAR2024-1144

#### Risk Factors Associated With Interstitial Lung Disease In A Mexican-Mestizo Population With Systemic Sclerosis.

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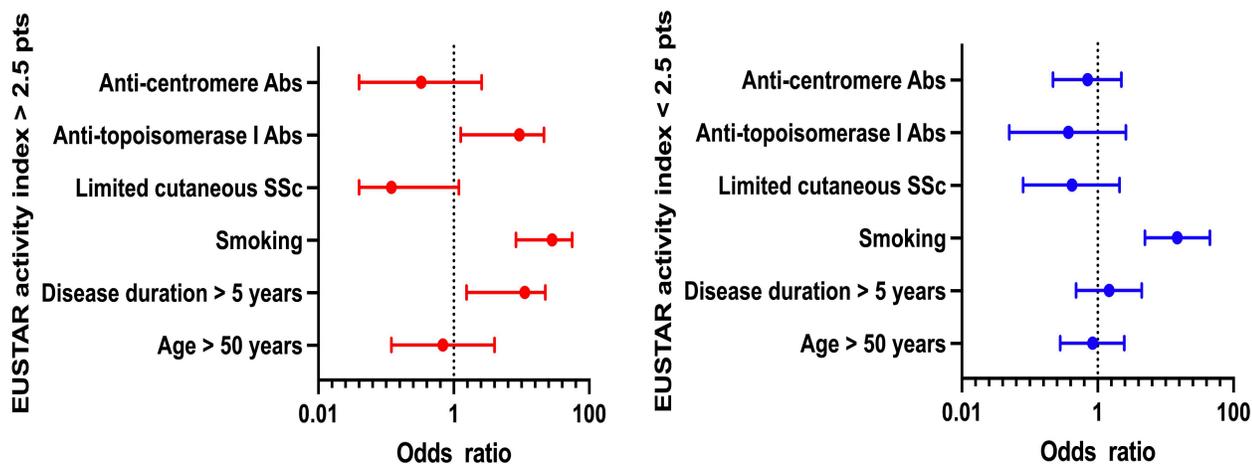
#### Has this paper been previously presented at another conference?: No

**Background/Objectives:** Interstitial Lung Disease (ILD) is related to increased mortality in Systemic sclerosis (SSc). The risk factors associated to SSc-ILD have shown variability in different populations. Few studies have scarcely described this factors in Mexican-mestizo population (1,2). The aim of this study is to evaluate the risk factors associated with SSc-ILD in a Mexican-mestizo population.

**Methods:** Cross-sectional study, where patients > 18 years of age with a diagnosis of SSc according to EULAR/ACR 2013 criteria and diagnosis of ILD by forced vital capacity (FVC) < 70% and > 5% of affected lung area on tomography were included. *European Scleroderma Trial and Research (EUSTAR) activity index was used to measure activity of disease. SSc activity was considered with an EUSTAR activity index > 2.5 points.* The strength of association of the factors for ILD was measured by odds ratio (OR) with 95% confidence intervals (95% CI). The significant variables were analyzed by multiple logistic regression with adjustment. Finally, a stratification analysis was performed by disease activity as a confounding variable. The study was approved by the local ethics and research committee under number R-2022-1301-084.

**Results:** Of the 180 patients with Ssc, 71 (39.4%) had ILD. Risk factors such as smoking, diffuse cutaneous subtype of Ssc, a higher EUSTAR activity index, anti-topoisomerase I antibodies and protective factors such as a limited cutaneous subtype of SSc and anti-centromere antibodies were associated with ILD. In the multivariate analysis, a disease duration of disease > 5 years with OR 2.60, (95% CI 1.06-6.37), smoking with OR 18.8, (95% CI 7.96-44.60), and a EUSTAR activity index > 2.5 pts with OR 3.56, (95% CI 1.33-9.56) persisted as risk factors, while a limited cutaneous subtype of SSc with OR 0.17, (95% CI 0.04-0.71) persisted as a protective factor associated with SSc-ILD. In the stratification analysis, patients with activity of Ssc showed a longer duration of disease, presence of anti-topoisomerase I antibodies and smoking as risk factors associated with Ssc-ILD. In contrast, patients with remission of disease activity only smoking remained a risk factor independently associated with SSc-ILD (figure 1, forest plot based of stratification analysis).

#### Image 1:



**Figure 1.** Forest plot based of stratification analysis by disease activity for risk factors independently associated with SSc-ILD in a multivariate logistic regression model. SSc activity was considered with an EUSTAR activity index > 2.5 points, while remission occurred with a < 2.5 points of this index. Abbreviations: Antibodies (Abs); European Scleroderma Trial and Research (EUSTAR); points (Pts); Systemic sclerosis (SSc); Systemic sclerosis-associated interstitial lung disease (SSc-ILD).

**Conclusion:** Risk factors such as a longer duration of disease and anti-topoisomerase I antibodies were impacted by disease activity, only smoking persisted as a risk factor associated with SSc-ILD independently of the effect of disease activity.

**Reference 1:** Rodriguez-Reyna TS, Hinojosa-Azaola A, Martinez-Reyes C, Nuñez-Alvarez CA, Torrico-Lavayen R, García-Hernández JL, Cabiedes-Contreras J. Distinctive autoantibody profile in Mexican Mestizo systemic sclerosis patients. *Autoimmunity*. 2011 Nov;44(7):576-84. doi: 10.3109/08916934.2011.592886.

**Reference 2:** Gonzalez-Lopez L, Rocha-Muñoz AD, Olivas-Flores EM, Garcia-Gonzalez A, Peguero-Gómez AR, Flores-Navarro J, Villa-Manzano AI, Zavaleta-Muñoz SA, Salazar-Paramo M, Mejía M, Juárez-Contreras P, Vazquez-Del Mercado M, Cardona-Muñoz EG, Trujillo-Hernández B, Nava-Zavala AH, Gamez-Nava JI. Procollagen Type I and III Aminoterminal Propeptide Levels and Severity of Interstitial Lung Disease in Mexican Women With Progressive Systemic Sclerosis. *Arch Bronconeumol*. 2015 Sep;51(9):440-8. English, Spanish. doi: 10.1016/j.arbres.2014.06.018.

**Disclosure of Interest:** None Declared

**Keywords:** interstitial lung disease, risk factors, systemic sclerosis

## PANLAR 2024

### Vasculitis and related diseases

#### PANLAR2024-1147

### Prevalence Of The IL-6 Gene Promoter Polymorphism And Its Implication In Corticosteroid-Free Remission In Patients With Polymyalgia Rheumatica

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#### Has this paper been previously presented at another conference?: Yes

**Background/Objectives:** Polymyalgia rheumatica (PMR) is an inflammatory disease that affects people  $\geq 50$  years of age. Acute phase reactants (APR) and interleukin 6 (IL-6) are biomarkers associated with disease activity. The C/C polymorphism and the C allele of the IL-6 gene promoter have been associated with persistently elevated levels of IL-6 and a lower probability of achieving disease remission.

To determine the prevalence of the C/C genotype and the C allele of the IL-6 gene promoter in patients with PMR and to evaluate the association of this genotype and APR with corticosteroid-free remission.

**Methods:** A total of 76 patients were evaluated, of which 49 met the inclusion criteria. A descriptive analysis was performed and a peripheral blood sample was obtained to purify genomic DNA and perform genotyping of the IL-6 -174 polymorphism (rs1800795) by real-time polymerase chain reaction using TaqMan allelic discrimination technology. APR, IL-6 levels at diagnosis and during follow-up were evaluated.

To evaluate the factors associated with corticosteroid-free remission, a multivariate logistic regression model was constructed, considering  $p < 0.05$  as statistically significant.

**Results:** The prevalence of the C/C genotype and the C allele in patients with PMR was 10.20% and 40.8%, respectively. Patients with elevated C-reactive protein (CRP) values (more than three times the reference value) at diagnosis had a lower probability of corticosteroid-free remission at 12 months of follow-up (OR 0.087, 95% CI 0.004-0.677,  $p = 0.041$ ). No statistically significant association was found between the C/C genotype ( $p = 0.99$ ), the C allele ( $p = 0.782$ ) and disease remission.

#### Image 1:

**Table 1. Population General Characteristics**

	Genotype C/C (n=5)	G/C genotype (n= 15)	G/G genotype (n =29)	p
<b>Age at diagnosis, mean ± SD, years</b>	70.4 ± 8.79	73.0 ± 6.38	72.0 ± 6.25	0.73
<b>Sex, n (%)</b>				
Female	4 (80%)	7 (46.7%)	20 (69%)	0.25
<b>Comorbidities, n (%)</b>				
Arterial hypertension	4 (80%)	10 (66.7)	19 (65.5)	0.81
Diabetes mellitus type 2	0 (0%)	1 (6.7)	5 (17.2)	0.40
Acute myocardial infarction	0 (0%)	1 (6.7)	1 (3.4)	0.78
Dyslipidemia	1 (20%)	8 (53.3)	8 (27.6)	0.18
Osteoporosis	1 (20%)	1 (6.7)	3 (10.3)	0.69
<b>PMR* symptoms, n (%)</b>				
Disease duration, median (IQR), weeks	8 (4-20)	8 (8-10)	8 (4-16)	0.70
Morning stiffness	3 (60)	10 (66.7)	16 (55.2)	0.76
Shoulders pain	5 (100)	15 (100)	28 (96.6)	0.70
Hips pain	4 (80)	14 (93.3)	26 (89.7)	0.69
Arthralgias/arthritis	3 (60)	10 (66.7)	18 (62.1)	0.94
Constitutional	1 (20)	1 (6.7)	2 (6.9)	0.59
<b>ESR* at diagnosis, mean ± SD</b>	88.4 ± 31.6	48.53 ± 29	60.1 ± 28.7	<b>0.037</b>
<b>PCR* at diagnosis, mean ± SD</b>	64.2 ± 50.1	19.75 ± 15.4	30.4 ± 26.1	<b>0.013</b>
<b>Serum IL-6 level at diagnosis, median (IQR), pg/mL</b>	15.3 (6.1-29.2)	13.6 (4.6-25.6)	14.0 (4.8-31.9)	0.93
<b>Corticosteroid-free remission , n(%)</b>	0	2 (13.3%)	4 (13.8%)	1

\*PMR = polymyalgia rheumatica; ESR = erythrocyte sedimentation rate; CRP = ultrasensitive C reactive protein; IL-6= interleukin-6.

**Image 2:**

**Table 2. Multivariate logistic regression analysis of factors associated with corticosteroid-free remission at 12 months**

<i>Predictors</i>	<i>Odds Ratios</i>	<i>95% CI</i>	<i>p</i>
Male	2.636	0.384 - 19,592	0.317
Age	1.025	0.881 - 1.189	0.740
Elevated baseline CRP	0.087	0.004 - 0.677	<b>0.041</b>
Allele C	0.756	0.082 - 5.204	0.782

**Conclusion:** In our population, no association was found between the C/C genotype and disease remission, however no patient of the C/C genotype achieved remission at 12 months compared with the no-C/C genotype. High CRP values at diagnosis appeared to be a risk factor for not achieving corticosteroid-free remission at 12 months. These results may differ with a larger number of patients.



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**Disclosure of Interest:** None Declared

**Keywords:** corticosteroid-free remission, IL-6 polymorphism, Polymyalgia Rheumatica

## PANLAR 2024

### Systemic lupus erythematosus

#### PANLAR2024-1151

#### The Lfa-Real Clinician Reported Outcome Predicts Damage In Patients With Systemic Lupus Erythematosus (Sle).

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#### Has this paper been previously presented at another conference?: Yes

**Background/Objectives:** The Lupus Foundation of America Rapid Evaluation of Activity in Lupus (LFA-REAL) clinician-reported outcome (ClinRO) correlates well with other disease activity indices such as the SLEDAI-2K and the PGA; however, its predictive value remains to be evaluated. The aim of this study was to evaluate the predictive value of the LFA-REAL on damage accrual in SLE patients.

**Methods:** The LFA-REAL-ClinRO includes nine domains: mucocutaneous, musculoskeletal, cardiorespiratory, neuropsychiatric, renal, hematological, constitutional, vasculitis and other (rare manifestations). Mucocutaneous includes one global scale and three subdomains (rash, alopecia and mucosal ulcers); musculoskeletal includes one global scale and two subdomains (arthralgia/arthritis and myalgia/myositis). For each domain, a 0 to 100 mm Visual Analogue Scale (VAS) is used being the summary score the sum of individual domains except for the mucocutaneous and musculoskeletal domains where the subdomains are included; it allows for three manifestations under “other” so, the score ranges from 0 to 1400 (sum of 14 VAS). Damage was assessed with the SLICC/ACR damage index (SDI). Generalized estimating equations were performed, being the outcome the increase in the SDI; confounders from the previous visit were included; adjusted multivariable models were done. Incidence Rate Ratio (IRR) per 10 units increase in the LFA-REAL-ClinRO were reported.

**Results:** Three-hundred and thirty-one patients and 1425 visits were included. The mean LFA-REAL-ClinRO was 18.2 (SD 30.7). During the follow-up visits, 63 (17.9%) patients accrued damage once; four (1.1%) accrued damage twice. In the univariable and multivariable models, both LFA-REAL ClinRO predicted damage accrual (Table 1).

**Table 1:** Table 1 Predictive value of the LFA-REAL-ClinRO on damage accrual in SLE patients

#### Univariable model

#### Multivariable model\*

IRR (CI 95%)

p value

IRR (CI 95%)

p value



*Main analyses*

LFA-REAL- ClinRO (0-1400)**	1.07 (1.01-1.14)	0.016	1.10 (1.04-1.16)	<0.001
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*Alternative analyses*

LFA-REAL- ClinRO (0-1100)**	1.09 (1.01-1.16)	0.022	1.12 (1.05-1.20)	<0.001
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\* Adjusted for age at diagnosis, gender, socioeconomic status, SLICC/ACR damage index, disease duration, prednisone daily dose, antimalarial and immunosuppressive drugs use in the previous visit. \*\*per 10-unit increase. \*\*\* per 1-unit increase.

**Conclusion:** The LFA-REAL ClinRO is predictive of damage accrual, even after adjusting for possible confounders. Larger studies are needed to determine the relevance of this index for SLE patients.

**Disclosure of Interest:** M. Ugarte-Gil Grant / Research support with: Janssen, Consultant with: Aztra-Zeneca, Ferrer, Speakers Bureau with: GSK, Aztra-Zeneca, R. Gamboa-Cárdenas: None Declared, V. Pimentel-Quiroz: None Declared, C. Reátegui-Sokolova: None Declared, C. Elera-Fitzcarrald: None Declared, E. Noriega: None Declared, C. Pastor-Asurza: None Declared, Z. Rodriguez-Bellido: None Declared, R. Perich-Campos: None Declared, G. S. Alarcón: None Declared

**Keywords:** damage, outcome, systemic lupus erythematosus

## PANLAR 2024

### Spondyloarthritis

#### PANLAR2024-1153

### Early Axial Spondyloarthritis According To The New Asas Criteria In An Argentine Cohort. Analysis From The Clinic, Laboratory And Images

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#### Has this paper been previously presented at another conference?: No

**Background/Objectives:** Recently, the ASAS group has established by consensus the definition of early axial spondyloarthritis (early axSpA), in which the onset of axial symptoms must be equal to or less than 2 years. **Objective :** To estimate the prevalence at diagnosis of early AxSpA and analyze the clinical, laboratory and imaging differences between those who do and do not meet the definition according to three analyses.

**Methods:** Observational, cross-sectional study, patients with a diagnosis of axSpAn(2017-2022) were included. All patients underwent baseline HLA-B27, X-ray and MRI of SI, enthesitis ultrasound, sociodemographic data, AxSpA symptoms and clinimetry. All evaluator was unaware of the results of the complementary studies. Early axSpA was defined as a duration of axial symptoms  $\leq 2$  years at diagnosis, its prevalence was estimated in the 3 cohorts: Total, met classification criteria and without psoriasis (in order to eliminate the possibility of evaluating patients with axial PsA), Statistical analysis: descriptive statistics, basic and advances analysis was made.

**Results:** 124 patients were included, features in Table 1. Of the total, the prevalence of early AxSpA was: **38%. (95% CI 30-46)** . The relevant differences were (yes/no) Smoking (30% vs 51% p0.02), Response to NSAIDs (58% vs 74% p0.06), family history (FH) (38% vs 23%), Rx NY+ Criteria (37% vs 71% p0.03). Logistic regression analysis, negatively TBQ (OR: 0.4, 95% CI: 0.1-0.9) and positively HF (OR: 2.4, 95% CI: 1.1-5.7). In the classifying criteria cohort, the prevalence of early axSpA was **33%**. The relevant differences were (yes/no) Smoking (25% vs 45% p0.07), FH (43% vs 23% p0.06), chest pain previous (8% vs 27% p0.04), Age at diagnosis (37 DS 6.4 vs 45 DS 10) and years of study (15 DS2 vs 13 DS4). In the logistic regression analysis, it was independently associated with HF (OR: 6.3 95% CI: 1.2-33), age at diagnosis (OR: 0.8 95% CI: 0.8-0.9), years of study (OR: 1.4 95% CI: 1.1-1.9). In the cohort without psoriasis, the prevalence of early axSpA was **36%**. The relevant differences were (yes/no) Smoking (16% vs 41% p 0.02), Rx NY+ Criteria (41% vs 58% p0.06), sclerosis in MRI (32% vs 15% p0.09). In the logistic regression analysis, it was independently associated with sclerosis on MRI (OR: 4.6, 95% CI: 1.1-18).

#### Image 1:



	<b>axial SpA (n: 124)</b>
<b>Age, mean (SD)</b>	46 (12.4)
<b>Years of study, mean (SD)</b>	13.4 (3.2)
<b>Age of onset of low back pain, mean (SD)</b>	40 (12.2)
<b>From onset of low back pain to diagnosis, median (IQR) months</b>	41 (15-121)
<b>Smoking %</b>	40
<b>Uveitis %</b>	5.4
<b>Psoriasis %</b>	24
<b>Inflammatory bowel disease %</b>	6.3
<b>SpA family history %</b>	26
<b>NSAID good response %</b>	67
<b>HLA-B27+ %</b>	48
<b>Inflammatory lower back pain %</b>	85
<b>Number of SpA Features (DS)</b>	3.7 (1.4)
<b>Characteristics of SpA &gt;4</b>	46
<b>SI + Rx</b>	Four. Five
<b>Sacroiliac MRI+ (any injury)</b>	83
<b>MRI SI: edema</b>	62
<b>SI MRI: chronic changes (any)</b>	68
<b>SI MRI: fatty changes</b>	35
<b>MRI SI: erosions</b>	46
<b>MRI SI: sclerosis</b>	twenty
<b>SI MRI: bone bridges</b>	6
<b>Enthesitis Ultrasound+</b>	42
<b>Sacroiliac maneuvers %</b>	55
<b>Pain in anterior chest %</b>	twenty-one
<b>VAS pain, mean (SD)</b>	6.9 (1.5)
<b>VAS night pain, mean (SD)</b>	5.6 (2.3)
<b>Morning stiffness, median (IQR)</b>	30 (15-40)
<b>BASFI, mean (SD)</b>	4.6 (1.3)
<b>BASDAI, mean (SD)</b>	4.4 (1.75)
<b>Presence of arthritis %</b>	25
<b>Presence of enthesitis %</b>	40
<b>MASES, median (IQR)</b>	0 (0-1)
<b>HAQ-DI, median (IQR)</b>	0.7 (0.5-1)
<b>CRP mg/l, median (IQR)</b>	2 (1-6)
<b>CRP elevation &gt;5 mg/L</b>	39
<b>1-h ESR, median (IQR)</b>	17 (10-25)
<b>Biological Treatment</b>	46
<b>TNFb</b>	31
<b>IL17b</b>	11



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**Conclusion:** The prevalence of early axSpA is around 35%, in general, it is associated with less TBQ, HF of SpA, fewer changes in SI X-ray, younger age at diagnosis, more years of study and presence of sclerosis on MRI.

**Disclosure of Interest:** None Declared

**Keywords:** axial spondyloarthritis, diagnosis, early onset

## PANLAR 2024

### Infections (including COVID-19)

#### PANLAR2024-1162

### Comparison Of, Cytokine Profile In Patients With Rheumatoid Arthritis: A Study Of Cases With Covid-19 And Controls Without Covid-19

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#### Has this paper been previously presented at another conference?: No

**Background/Objectives:** SARS-CoV-2 can cause chronic inflammatory alterations known as post-COVID syndrome (PCS), which is associated with autoimmune diseases such as rheumatoid arthritis (RA). Therefore, understanding the impact of the virus on immune alterations is important in SARS-CoV-2 infected RA patients. The aim of this study is to evaluate the cytokine profile in patients with RA and COVID-19 infection and compare it with that of patients with RA not infected with COVID-19.

**Methods:** A nested case-control study in a cohort of patients under a multidisciplinary model and strict follow-up; cases: patients with RA and confirmed COVID-19 infection in the last 2 years, and controls: RA patients without history of COVID-19. Long COVID (LC): Persistent symptoms  $\geq 4$  weeks, and PCS: persistent symptoms  $\geq 12$  weeks. Sociodemographic, clinical, and laboratory data were collected. Multiplex Cytometric Bead Array (CBA) was used to measure cytokines (IL17, IL-12p70, IL-10, IL-6, IL-4, IL-2, IFN- $\gamma$ , and TNF). Univariate and bivariate analyses were performed (STATA 17). Ethical committee approval was obtained.

**Results:** A total of 300 patients were included (148 cases and 152 controls). Median age was 59 years (interquartile range - IQR 11). Disease activity was low in 71.86%. There were no significant differences in sociodemographic and clinical characteristics between cases and between cases and controls. No statistically significant differences were found in any cytokines between cases and controls, with P values  $> 0.05$ . Comparisons were made (No Covid vs. LC and No Covid vs. PCS) and among patients diagnosed with COVID-19 (LC vs. No LC, Table), in which no significant changes in cytokine populations were found.

#### Table 1:

Table. Comparison of Cytokines Profile (LC vs No LC)	
±	
: U de mann Whitney	
IL-12p70(148)	0.762
IL17(141)	0.731

IFN- $\gamma$ (145)	0.941
TNF(143)	0.098
IL-10(137)	0.366
IL-4(140)	0.967
IL-2(141)	0.926

**Conclusion:** The results provide an overview on a population of RA patients. In this group, no differences in cytokine profile were identified, regardless of the presence of LC and PCS symptoms. This finding suggests that these patients tend to return to their baseline state. However, it should be noted that strict disease control treatment may also contribute to a rapid and effective regulation of cytokine levels.

**Disclosure of Interest:** None Declared

**Keywords:** COVID-19, Cytokines, rheumatoid arthritis

## PANLAR 2024

### Fibromyalgia and pain

#### PANLAR2024-1177

#### Fibromyalgia Management In Latin America: Data From The Fibrolatam Survey

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#### Has this paper been previously presented at another conference?: No

**Background/Objectives:** The management and evaluation of fibromyalgia (FM) is complex, the perception of the disease has been a debate within the medical community and patients. This group of authors created a survey (FibroLatam) and distributed to region in order to determine the various aspects of fibromyalgia management. The purpose of the study was to analyze the approach to fibromyalgia management among rheumatologists practicing in Latin America.

**Methods:** Prospective observational study that involves a creation of a 38-question survey to inquire about the perception of rheumatologist towards fibromyalgia. Survey was validated by rheumatologist of the region and validated in Spanish, English and Portuguese. PANLAR Research and Ethical Committee supported the project. The survey was sent in January 24th, 2023 through PANLAR communication department to all members. Data analysis was performed with SPSS v.29.

**Results:** We received a total of 434 surveys, 55% male and 45% women with a mean average of 48.06±12.35 [27-80]. The majority was focused on adult rheumatology with 98.5% and 1.5% pediatrics. FM was the reason of consult in ~26% of the cases. 46.5% considered the use of multimodal therapies very effective, and 39.5% of rheumatologist always recommended it. Behavioral health was recommended frequently and always, in 37.1% and 29.7%, respectively. Considering the pharmacologic therapies, the use of duloxetine was frequently recommended in 63.4%, pregabalin 62.7%, amitriptyline 38.2%, cyclobenzaprine 32.7% and milnacipram 0.9%. The most effective dose of pregabalin was considered to be 150mg daily in 49.3%. The use of opioids was reported as never 19.8%, infrequently 38.5%, sometimes 27.2% frequently on 12.7% and always in 1.8%; and 50.5% of rheumatologist considered that the use of opioids are not appropriate for the FM management. The most common opioids used were tramadol in 82%. The use of cannabinoids was considered slightly effective in 14.7%, moderately in 23.5%, very effective 10.6%, and extremely effective in 1.8%; it was frequently recommended in 2.8%.

**Conclusion:** Pregabalin and duloxetine are the drugs of choice for rheumatologists in the region, however the doses of pregabalin are usually low or subtherapeutic. The management of fibromyalgia in the region follows the recommendations of the currently available guidelines; prioritizing multimodal therapies and the use of duloxetine, amitriptyline pregabalin, cyclobenzaprine. Most rheumatologists considered the use of opioids inappropriate.

**Disclosure of Interest:** None Declared

**Keywords:** Fibromyalgia management



## PANLAR 2024

### Infections (including COVID-19)

#### PANLAR2024-1183

### A Follow-Up Study In Children With Multi-System Inflammatory Syndrome Temporally Related To Sars-Cov-2 Infection (Mis-C/Ts), From A Third Level Hospital In Mexico.

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#### Has this paper been previously presented at another conference?: No

**Background/Objectives:** To analyze clinical and laboratory features in children with MIS-C/TS, according with WHO criteria, from a third level hospital in Mexico.

**Methods:** A follow-up study of all patients who met WHO criteria of MIS-C/TS, evaluated at hospital admission and at one-year follow-up visit after hospital discharge. Two primary outcome variables were studied: the necessity of a pediatric intensive care unit (PICU) at hospital admission and the presence of autoimmunity, defined as the presence of 1:80 titles of antinuclear antibodies (ANA) at admission and in one-year follow-up visit. Association between single independent variables and the binary selected outcomes was assessed in a univariate analysis computing odds ratio (OR) and 95% confidence intervals (95% CI).

**Results:** 40 previously healthy children completed WHO criteria of MIS-C/TS, with a median age of 6.8 years; female: male ratio: 1.2; median duration of fever: 6.3 days; Kawasaki-like clinical manifestations: 75% of patients; completed Kawasaki criteria: 22%; Hypotension or shock: 57%; myocardial dysfunction: 47%; pericarditis: 45%; valvulitis: 15%; coronary abnormalities: 17.5%; coagulopathy (by PT, PTT or elevated d-Dimers): 30%; gastrointestinal manifestations: 27.5%; elevated markers of inflammation (ESR, C-reactive protein): 92.5%; evidence of SARS-CoV-2 infection by likely contact: 90%; antigen test (+): 53%; RT-PCR (+): 59% and Ig-G SARS-CoV-2 (+): 68%. ANA (+) was observed in 40% of patients at hospital admission and in 25% at one-year follow-up visit. Seventy percent of patients were admitted to PICU. Hypotension or shock (OR: 107; 95%CI: 5.5-2093; p=0.0021); myocardial dysfunction (OR: 19.8; 95%CI: 2.2-177; p=0.0075); coagulopathy (OR: 18.9; 95%CI: 1-351.4; p=0.0484) and elevated markers of inflammation: (OR: 219; 95%CI: 12.2-3923.8; p=0.0003) were statistically significant associated with PICU admission. No clinical associations were found with ANA (+) at hospital admission and at one-year follow-up visit.

**Conclusion:** In this follow-up study, MIS-C/TS presents in previously healthy children as a delayed hyper-inflammatory condition and overlapping autoimmunity occurring after a SARS-CoV-2 infection. Hypotension or shock, myocardial dysfunction, coagulopathy and laboratory evidence of systemic inflammation were the principal outcome variables. ANA (+) was observed in up to 40% of patients at hospital admission and in 25% at one-year follow-up visit.

**Disclosure of Interest:** None Declared



**Keywords:** Follow-up study, multi-system inflammatory syndrome, SARS-CoV-2 infection

## PANLAR 2024

### Rheumatoid arthritis

#### PANLAR2024-1185

### High Prevalence Of Antinuclear Antibodies In Long-Standing Rheumatoid Arthritis: No Prognostic Impact Observed. Data From The Real Study.

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#### Has this paper been previously presented at another conference?: No

**Background/Objectives:** Antinuclear antibodies (ANA) tests are common in rheumatoid arthritis (RA) patients, complicating initial diagnoses. The long-term prognostic significance of ANA positivity in RA remains unclear. To evaluate the frequency of positive ANA test and its association with clinical outcomes in patients with long-standing RA, under real-life conditions.

**Methods:** Adults meeting ARA (1987) or ACR/EULAR (2010) criteria for RA across 11 public hospitals in Brazil underwent clinical interviews and laboratory assessments, including ANA and rheumatoid factor tests, as part of the REAL study. RA disease activity (SDAI) and disability (HAQ) were measured. Erosive disease was defined by erosion(s) in  $\geq 3$  distinct joints. Statistical analyses (chi-squared, t tests, ANOVA, logistic regression) were conducted using SPSS 25, with significance set at  $p < 0.05$ .

**Results:** In the REAL Study with 1115 participants, this sub-study includes 301 individuals (27%) tested for ANA. Most were female (92%), white (45.8%), with long-standing RA (duration of 176.2 months). The majority had positive RF (84.9%), high-titer RF in 63.9%, and erosive disease in 62.1%. Corticosteroids were used by 61.1%, methotrexate by 60.5%, and 39.9% were on biologics. ANA positivity (titers  $\geq 1:160$ ) was found in 51.8%, potentially rising to 70.4% with a lower cutoff ( $\geq 1:80$ ). Common ANA patterns included fine speckled (44.1%), dense fine speckled (23.8%), and homogeneous (17.8%). Table 1 shows how RA patients with negative / low ANA titers ( $\leq 1:80$ ) compare to those with positive moderate / high ANA titers ( $\geq 1:160$ ) in bivariate analyses. Bivariate analyses showed no association between ANA and race, and ANA patterns did not significantly differ in disease activity or disability scores. Logistic regression identified female sex and high-titer RF as independent predictors of positive ANA tests, while corticosteroid use and older age were associated with lower chances of positivity.

#### Image 1:



**Table 1 – Comparison between groups of patients with rheumatoid arthritis according to their titers of circulating antinuclear antibodies on indirect immunofluorescence test.**

Clinical Characteristics	ANA titers on IIF test <sup>#</sup>		Effect Sizes <sup>†</sup> [95%CI]	p-value*
	Negative/Low (n = 145)	Moderate/High (n = 156)		
Females, % (n)	88.3% (128)	95.5% (149)	2.83 [1.14, 7.03]	0.021 ●
High-titer RF <sup>**</sup> , % (n)	57.3% (82)	69.9% (109)	1.73 [1.07, 2.78]	0.024 ●
Erosive disease <sup>***</sup> , % (n)	66.7% (96)	59.1% (91)	0.72 [0.45, 1.16]	0.176
Extra-articular manifestations, % (n)	31.7% (46)	31.4% (48)	0.98 [0.60, 1.60]	0.948
Corticosteroid use, % (n)	69.7% (101)	53.2% (83)	0.50 [0.31, 0.80]	0.003 ●
Methotrexate use, % (n)	62.1% (90)	60.0% (92)	0.88 [0.55, 1.40]	0.583
bioDMARD use, % (n)	32.4% (47)	46.8% (73)	1.83 [1.15, 2.93]	0.011 ●
Age, mean (SD) years	57.8 (11.6)	53.6 (11.2)	4.3 [1.7, 6.8]	0.001 ●
Disease duration, mean (SD) months	180.9 (120.5)	171.8 (112.9)	9.0 [-17.5, 35.5]	0.503
CRP, mean (SD) mg/dL <sup>Δ</sup>	2.6 (5.3)	2.6 (4.6)	0.03 [-1.2, 1.3]	0.964
Hemoglobin, mean (SD) g/dL <sup>Δ</sup>	13.0 (1.3)	12.8 (1.4)	0.2 [-0.2, 0.5]	0.321
Lymphocytes count x10 <sup>3</sup> , mean (SD) <sup>Δ</sup>	2.2 (0.9)	2.0 (0.7)	0.2 [-0.0, 0.4]	0.106
Platelets count x10 <sup>3</sup> , mean (SD) <sup>Δ</sup>	272.3 (90.8)	256.3 (69.1)	16.0 [-4.8, 36.8]	0.130
Creatinine, mean (SD) mg/dL <sup>Δ</sup>	0.9 (0.7)	0.8 (0.2)	0.1 [-0.0, 0.3]	0.058
SDAI score, mean (SD)	19.2 (15.7)	17.0 (13.8)	2.1 [-1.6, 5.8]	0.258
HAQ score, mean (SD)	1.013 (0.831)	0.953 (0.789)	0.060 [-0.124, 0.244]	0.522

ANA: antinuclear antibodies. IIF: indirect immunofluorescence. RF: rheumatoid factor. bioDMARD: biologic disease modifying anti-rheumatic drug. SD: standard deviation. CRP: serum C-reactive protein (mg/dL). SDAI: Simplified Disease Activity Index. HAQ: Health Assessment Questionnaire. # Titers of antinuclear antibodies on indirect immunofluorescence tests were classified as negative / low ( $\leq 1:80$ ) or moderate / high ( $\geq 1:160$ ). <sup>†</sup>Effect sizes: odds ratios and mean differences, for categorical and continuous variables respectively. \* p-values based on chi-squared or students' t tests, for categorical and continuous variables respectively. \*\* RF titers > 3x the upper limit of normality on agglutination (latex, Waller-Rose) or nephelometry tests. \*\*\* Defined by the finding of erosion(s) in  $\geq 3$  distinct joints in a standardized evaluation. ● Variables showing statistically significant differences across the groups. <sup>Δ</sup> Lab evaluations conducted on blood samples.

**Conclusion:** High prevalence of circulating ANA was found among patients with long-standing RA. High-titer RF was associated with higher frequencies of positive ANA tests, whereas corticosteroid use reduced the chances of ANA positivity. No meaningful differences were observed between groups of patients with positive vs. negative/weakly positive ANA tests, in terms of disease activity, disability scores, presence of erosive disease or occurrence of extra-articular manifestations. Therefore, ANA positivity does not seem to affect RA prognosis in the long term.

**Reference 1:** Wee MM, Lems WF, Usan H, et al. The effect of biological agents on work participation in rheumatoid arthritis patients: a systematic review. *Ann Rheum Dis.* 2012;71(2):161–71.

**Reference 2:** da Mota LMH, Cruz BA, Brenol CV, Pereira IA, Rezende-Fronza LS, Bertolo MB, et al. Diretrizes para o tratamento da artrite reumatoide guidelines for the drug treatment of rheumatoid arthritis. *Revista Brasileira de Reumatologia* 2013; 53(2):158–183.

**Disclosure of Interest:** None Declared

**Keywords:** 1. Rheumatoid arthritis; 2. Antinuclear antibody; 3. Prognosis

## PANLAR 2024

### Spondyloarthritis

#### PANLAR2024-1186

### The Role Of Age And Duration Of The Disease In The Formation Of Bone Mineral Density Disorders In Men With Ankylosing Spondylitis

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#### Has this paper been previously presented at another conference?: No

**Background/Objectives:** In recent years, it has become increasingly evident that the decrease in bone mineral density and the development of osteoporosis are one of the main complications of ankylosing spondylitis (AS). Along with that, the key feature of AS is pathological bone formation leading to ankylosis of the spine and sacroiliac joints.

**Methods:** A study was conducted with the participation of 105 men with AS, whose average age was  $40,7 \pm 0,8$  years with a duration of the disease of  $8,7 \pm 0,5$  years. BMD of the lumbar spine and femoral neck was determined by the method of dual-energy X-ray absorptiometry.

**Results:** In men with AS, a decrease in BMD (according to the Z-score) was found in every third patient, while at the level of the lumbar spine – 4,8 times more often (33,3%) than at the level of the femoral neck (6,9%). A detailed analysis of BMD according to the T-score showed that the share of patients with osteoporosis at the level of the femoral neck and lower back was 16,7%. Development of osteoproliferative changes was observed in 42 (40%) patients. When analyzing the age characteristics, we found that the indicators of BMD in both studied areas differed as the age of the patients increased. In particular, the average values of Z-, T-score at the lower back level were the lowest in the age group of 18-29 years and were  $-1,55 \pm 0,2$ ;  $-1,56 \pm 0,2$ , while in the age category of patients of 45-59 years the indicators significantly increased to the level of  $-0,3 \pm 0,4$ ;  $0,8 \pm 0,4$ . In older age groups, the proportion of patients with syndesmophytes increased. Thus, in the categories of patients aged 45-59 and 30-44, syndesmophytes were detected 3,4 and 2,4 times more often (61,1% and 44,1%), compared to the group of patients aged 18-29 years (17,8%). BMD was not associated with disease duration. In particular, the largest number (59,1%) of patients with low BMD was found in the group of patients with a duration of the disease from 5 to 10 years. At the same time, with increasing time from the onset of the disease, the number of people with syndesmophytes increased. Thus, in the group with a disease duration of more than 10 years, syndesmophytes were found in 41,5% of people, while in the group with a disease history of up to 5 years, there were only 10% of them.

**Conclusion:** A decrease in BMD is found in 41,9% of men with AS and does not depend on the age, duration of the disease, while syndesmophytosis is found in 40% of the examined and has a reliable association with the age and the duration of the disease.

**Disclosure of Interest:** None Declared



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**Keywords:** ankylosing spondylitis, bone mineral density, syndesmophytes

## PANLAR 2024

### Rheumatoid arthritis

#### PANLAR2024-1188

### Mean Corpuscular Volume And Red Cell Distribution Width As Predictors Of Methotrexate Response In Rheumatoid Arthritis Patients

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#### Has this paper been previously presented at another conference?: Yes

#### Background/Objectives: Primary:

Correlate  $\Delta$ RDW and  $\Delta$ MCV between baseline and week 12 with the number of patients achieving remission or low disease activity measured by CDAI in RA treated with MTX at week 24.

#### Secondary:

Describe the proportion of patients achieving low activity/remission by CDAI at week 24.

Describe CDAI 50/70/85 responses at weeks 12 and 24.

Evaluate other clinical factors affecting MTX response.

Characterize the safety and tolerability profile of Methotrexate in RA patients at week 24.

Correlate  $\Delta$ RDW and/or  $\Delta$ MCV between baseline and week 12 with the number of patients achieving remission or low disease activity measured by DAS28 in Rheumatoid Arthritis treated with Methotrexate at week 24.

**Methods:** Materials and Methods: A retro-prospective, analytical, and observational study in consecutive adult patients diagnosed with RA (ACR/EULAR 2010). Demographic data, clinical characteristics, personal history, initiated treatments, and VCM (fL) and RDW (%) at weeks 0, 4, 12, and 24 were evaluated. Safety data were recorded. Statistical analysis: Descriptive analysis, Chi2 test or Fisher's exact test; Student's T-test or Mann-Whitney and ANOVA or Kruskal-Wallis. Linear and/or multiple logistic regression.

## Results:

Results were analyzed by intention-to-treat for 139 patients. Between baseline and week 12, a  $\Delta$ RDW m of 0.8 (IQR 0-2.4) and a  $\Delta$ VCM m of 2.2 (IQR 0.2-4.5) were recorded. No correlation was found between  $\Delta$ RDW and CDAI at week 24 (Rho= -0.073; p=0.433), but a statistically significant correlation was found between  $\Delta$ VCM and CDAI at week 24 (Rho= -0.217; p=0.018). 64.2%, 39.4%, and 15.6% of patients achieved CDAI 50/70/85 responses, respectively, at week 12, with no significant changes at week 24. Univariate and multivariate analysis identified that the only factor significantly associated with achieving CDAI 50 response at week 24 was achieving such response at week 12 (p=0.001). 68 patients (48.9%) experienced adverse events, with 20 (14.4%) events related to MTX, 5 (3.6%) were considered serious adverse events unrelated to treatment.

**Conclusion:** The study found that starting methotrexate (MTX) treatment led to increased red cell distribution width (RDW) and mean corpuscular volume (VCM). Only the change in VCM was significantly linked to rheumatoid arthritis (RA) activity at week 24. Despite some positive responses at week 12, no significant changes occurred by week 24. Safety analysis showed adverse events, but only a small proportion were serious and unrelated to treatment

**Disclosure of Interest:** None Declared

**Keywords:** None

## PANLAR 2024

### Systemic lupus erythematosus

#### PANLAR2024-1194

### Relationship Between Cardiovascular Comorbidities And Sleep Pattern In Patients With Systemic Lupus Erythematosus.

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#### Has this paper been previously presented at another conference?: No

**Background/Objectives:** The aim of this study was to determine the relationship between cardiovascular comorbidities and nocturnal sleep patterns in patients with SLE.

**Methods:** Cross-sectional study on SLE patients meeting ACR/EULAR 2019 criteria, aged 18 or older. Exclusions: overlapping syndromes, prior major cardiovascular events, and pregnancy. Sleep hours are categorized: as <7 hours, ≥7 hours, and ≥9 hours. Cardiovascular risk factors were obtained from medical history; TAG, TC, and HDL values were obtained from lab exams. Group distribution was assessed by Kolmogorov-Smirnov test. Comparisons were made using Chi-square, ANOVA, and Kruskal Wallis tests. Correlations were analyzed with Spearman's rho and Pearson's r. Significance set at  $p \leq 0.05$ .

**Results:** Eighty-eight SLE patients, mostly women (87.9%), aged  $35.1 \pm 12.3$  years, showed a significant hypertension difference in the ≥ 9 hours sleep group compared to others (53.0% vs. 16.1% and 14.2%,  $p=0.005$ ). Mean triglyceride (TAG) values also significantly differed among groups ( $p=0.013$ ). Post-hoc analysis highlighted a distinction between <7 hours and ≥ 9 hours sleep groups ( $108.8 \pm 65.9$  vs.  $121.6 \pm 59.6$ ,  $p=0.011$ ). No notable differences were observed in other cardiovascular comorbidities (Table 1). A positive correlation existed between TAG levels and nocturnal sleep duration (Pearson's  $r = 0.301$ ,  $p=0.004$ ) (Figure 1).

**Table 1:** Table 1. Demographic characteristics.

Characteristics	< 7 hours (n=31)	≥7 hours (n=42)	≥ 9 hours (n=15)	<i>P value</i>
Diabetes, n (%)	3 (9.6)	0 (0)	0 (0)	NS

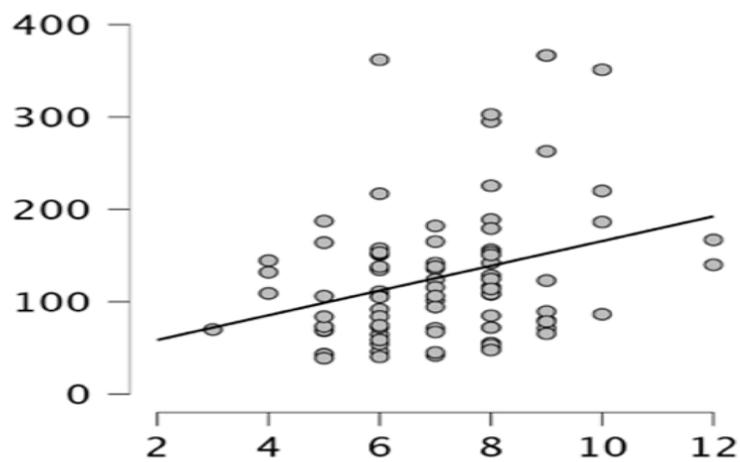
Hypertension, n (%)	5 (16.1)	6 (14.2)	8 (53.0)	<i>0.005</i>
Obesity, n (%)	6 (19.3)	4 (9.5)	3 (20)	NS
BMI, mean ± SD	25.5 ± 6.1	25.3 ± 5.5	24.9 ± 6.4	NS
TAG, mean ± SD	108.8 ± 65.9	121.6 ± 59.6	176.9 ± 111.7	0.013
TC, mean ± SD	162.9 ± 36.6	161.8 ± 50.7	157.0 ± 34.1	NS
HDL, mean ± SD	52.9 ± 15.3	53.4 ± 20.6	46.4 ± 16.2	NS

BMI, body mass index; TAG, tryacilglieride; TC, total cholesterol; HDL, high-density cholesterol; SLE, systemic lupus erythematosus; SD, standard deviation; NS, not significant.

**Image 1:**

**TAG**

**hours nocturnal sleep**





**Conclusion:** Inadequate (<7 hours) and prolonged ( $\geq 9$  hours) sleep affect cardiovascular health, heightening the risk of cardiovascular disease mortality. Our study challenges prior beliefs linking <7 hours of sleep to hypertension in non-rheumatic populations; instead, SLE patients exhibit higher prevalence in the  $\geq 9$ -hour sleep group. Early lifestyle interventions and comprehensive patient education are crucial for physicians, influencing health, quality of life, and prognosis significantly.

**Disclosure of Interest:** None Declared

**Keywords:** Cardiovascular risk, Comorbidities, Sleep

## PANLAR 2024

### Miscellaneous

#### PANLAR2024-1195

### Assessing The Impact Of A Multidisciplinary Care Model On An Established Cohort Of Rheumatoid Arthritis Patients In Colombia – A Ten-Year Real-Life Cohort Experience.

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#### Has this paper been previously presented at another conference?: No

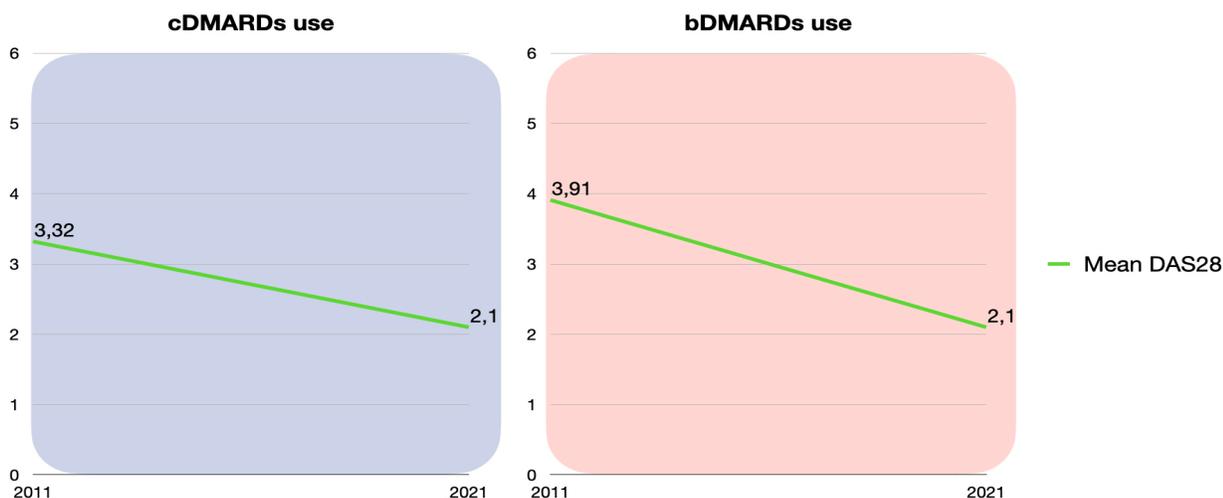
**Background/Objectives:** Rheumatoid arthritis (RA) is a persistent autoimmune disease that demands a targeted therapeutic approach through a multidisciplinary care model (MCM). This approach involves the collaborative efforts of various medical specialties (Rheumatology, Rehabilitation and Physical Medicine, Nutrition, Psychology, and General Medicine) aimed at improving the overall outcome of the disease. The aim of the present study is to comprehensively describe and analyze the impact of the multidisciplinary care model on disease activity.

**Methods:** A retrospective observational study was started involving adult prevalent RA patients under MCM. Data were recorded since January 2011 to June 2021 from databases. The analysis focused on patients' disease activity, assessed through measures such as DAS28 and RAPID3, as well as functional capacity, using MDHAQ. To describe numerical variables, Kolmogorov-Smirnov test, was conducted. Numerical data are presented as median and interquartile range (IQR), and comparisons were made using the Mann-Whitney U test. Categorical variables are described as percentages and underwent analysis through the chi-square test.

**Results:** 3163 were included. 72.8% (2302) were under conventional therapy and 27.2% (861) in biologic therapy. 81% (2564) were women; there were more men on biologic therapy than conventional therapy ( $p=0.015$ ). The median age of total group was 67 years (14) being higher in conventional therapy group ( $p < 0.05$ ). Seropositive for rheumatoid factor (RF) was 77.6%, and 73.4% for anti-CCP without differences between groups. 39.1% of patients were erosive being higher at biologics group ( $p=0.001$ ). Last MDHAQ in whole group was 0.40 (0.48), and was slightly higher in the biological 0.04 (0.57) vs conventional 0.04 (0.46) group  $p < 0.046$ . RAPID 3 in the whole group was 6 (4). Without differences between groups of treatment.

DAS28 at program entry for all group was 3.41 (1.9) and the latest DAS28 2.1 (0.49). There was statistically significant difference  $p < 0.05$  between initial DAS28 at model entry and at end in the whole group. As well as the initial DAS28 vs. the final DAS28 in the conventional group ( $p < 0.05$ ; 3.32 IQR 1.79 vs 2.1 IQR 0.49) and in biologic therapy ( $p < 0.05$ ; 3.91 IQR 2.3 vs 2.1 IQR 0.57).

#### Image 1:



**Conclusion:** The MCM for RA shows promise in improving disease activity. Yet, a more nuanced understanding of influencing variables is crucial, calling for additional studies to refine management strategies.

**Disclosure of Interest:** P. Santos-Moreno Grant / Research support with: Abbott, Biopas-UCB, Bristol, Janssen, Pfizer, Roche, Sanofi, Speakers Bureau with: Abbott, Biopas-UCB, Bristol, Janssen, Pfizer, Roche, Sanofi, G.-S. Rodriguez-Vargas: None Declared, N. Gutiérrez: None Declared, L. Villarreal: None Declared, F. Rodríguez-Flrido: None Declared, P. Rodríguez-Linares: None Declared, I. Ramírez-Ferrer: None Declared, E. Cardozo-Sandoval: None Declared, M. F. Linares-Contreras: None Declared, A. Mayor-González: None Declared, M. F. Cubides-Acosta: None Declared, M. J. Mantilla-Ribero: None Declared, A. Rojas-Villarraga: None Declared

**Keywords:** Care-model, Real world data, rheumatoid arthritis

## PANLAR 2024

### Imaging

#### PANLAR2024-1197

#### Use Of Thermography In Detecting Raynaud's Phenomenon Compared To Physical Examination

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#### Has this paper been previously presented at another conference?: No

**Background/Objectives:** Raynaud's phenomenon affects 10 to 20% of individuals with autoimmune diseases. A three-step approach based on clinical findings reported by the patient and evidenced by the examiner has been proposed for diagnosing. However, direct observation can be challenging in clinical practice. Infrared thermography has been evaluated, showing promise results. The main objective of this study was to compare changes detected through physical examination and thermography

**Methods:** We included patients who reported Raynaud's phenomenon. An initial clinical assessment was conducted to determine the presence of distal coldness or changes in coloration, followed by thermography (Thermal Imager LCD 2.4, 8MHz). Readings were taken on the back of the hand and distally on 10 fingers. A difference of more than 3 degrees was considered abnormal (**Fig 1**). For those with negative results, conventional hand washing was performed for one minute. Thermography and clinical assessment were repeated 10 minutes later

**Results:** 33 individuals were included. The average age was 54 years, duration of Raynaud's phenomenon was 7.1 ( $\pm 6.7$ ) years. Diagnoses were 51% systemic sclerosis, 27% Raynaud under study, 12% systemic lupus erythematosus, 9% other. Regarding autoantibodies, 11 had centromere pattern ANAs, 2 were SCL-70 positive, 7 had other ANA pattern. 36% had puffy fingers, 33% sclerodactyly, 12.5% calcinosis, and 10% had ulcers. 14 individuals had capillaroscopy, 35% normal, 28.5% active pattern, and 28.5% late; only 7.1% had an early pattern. Initial abnormal thermography was found in 14 individuals, and hand washing was performed in 19 individuals. The results of this and its relation to the physical examination are presented in **Table 1**. Initial thermography was abnormal in 21% and 34% of those who did not show coldness or changes in coloration. Conversely, the majority with alterations in the initial examination had abnormal thermography, 100% for coloration and 90% for coldness. Following hand washing, 47% of those who did not present coldness or changes in coloration exhibited abnormal thermography, contrasting with 100% with these findings.

#### Image 1:

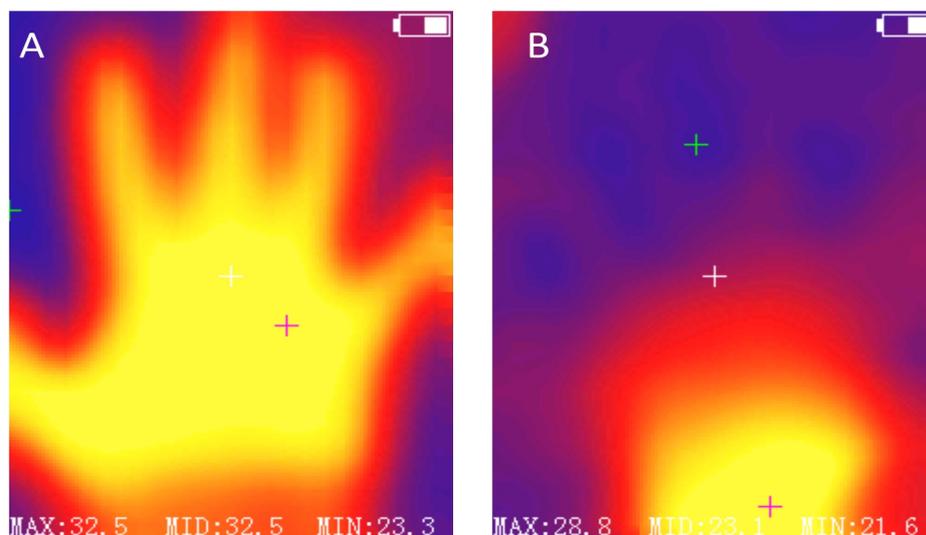


Figure 1. A: Patient's hand with normal thermography. B: Hand with abnormal thermography showing loss of heat pattern in the fingers due to Raynaud's phenomenon

**Image 2:**

	<i>Thermography +</i>	<i>Thermography -</i>
<b>INITIAL EXAMINATION (n=33)</b>		
<i>Coldness +</i>	9	1
<i>Coldness -</i>	5	18
<i>Coloration +</i>	4	0
<i>Coloration -</i>	10	19
<b>POST-EXPOSURE EXAMINATION (n=19)</b>		
<i>Coldness +</i>	2	0
<i>Coldness -</i>	8	9
<i>Coloration +</i>	2	0
<i>Coloration -</i>	8	9

**Table1.** Description of findings from the clinical examination and thermography

**Conclusion:** When there are no abnormalities in the physical examination, abnormal thermography can still be present in up to half of the cases, allowing the detection of an additional patients. Conventional hand washing using thermography may be a low-risk means for studying Raynaud's phenomenon.

**Reference 1:** R VJ, D C, L U, Y SG, L RW. Thermography for the detection of Secondary Raynaud's Phenomenon by means of the Distal-Dorsal Distance. Annu Int Conf IEEE Eng Med Biol Soc. 2020 Jul;2020:1528-1531



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**Disclosure of Interest:** None Declared

**Keywords:** Raynaud pemonomen, thermography

## PANLAR 2024

### Psoriatic arthritis

#### PANLAR2024-1198

### Prevalence Of Sternal Bone Edema In Patients With Spondyloarthritis And Psoriatic Arthritis With Axial Involvement

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#### Has this paper been previously presented at another conference?: Yes

**Background/Objectives:** Sternal enthesitis is seen as an hyperintense image on magnetic resonance (MRI) STIR sequences. Its prevalence and associations with disease activity and other lesions in MRI in patients with SpA and PsA are unknown.

The main objective was to determine and compare the the prevalence of sternal edema and sterno-clavicular joint synovitis in patients with SpA and axial PsA

**Methods:** We performed a subanalysis of a cross sectional study including consecutive patients with SpA (ASAS criteria) and PsA (CASPAR criteria) with clinical axial involvement. Patients under biologics or jak inhibitor treatment were excluded. Patients' clinical and demographic characteristics were collected: DAPSA, DAS28CRP, SDAI, CDAI, PASI, MASES and SPARCC score for enthesitis, BASDAI, BASFI, BASMI.

MRI (including STIR sequences) of the sacroiliac joints, cervical, thoracic and lumbar spine were performed, within one month of the clinical evaluation

**Results:** Forty five patients with SpA and 34 patients with axial PsA were included but only 33 of SpA and 27 of PsA had dorsal MRI in which sternal edema could be evaluated.

Table 1 shows clinical and demographic characteristics of the overall population. Patients with PsA had significantly higher enthesitis score (MASES>1), dactylitis, Body Mass Index and disease activity measured by BASDAI.

39% of patients with SpA and 26% of patients with PsA had sternal edema (p 0.271). Sterno-clavicular joint synovitis was found in 15% of SpA vs 7.4% in PsA (p 0.35).

No correlation was found between sternal edema and clinical and imaging features. (table 2).

#### Table 1:

**Image 1:**

Table 1	AxSpA (n=33)	Axial PsA(n=27)	P value
Male sex, % (n)	57(19)	55.6 (17)	0.492
Age dx, mean (SD)	43.3 (14.8)	44.7 (14.6)	0.015
Disease duration in month, mean (SD)	36.9( 14.2)	46.5 (11.8)	0.002
Skin %	0	100	0.00
Dactylitis % (n)	3 (1)	26 (7)	0.009
Enthesitis (MASES >1) %(n)	15 (5)	7.4 (2)	0.353
BMI, mean (SD)	23.9 (3.2)	26.8 (3.6)	0.002
DAS 28 PCR mean (SD)	2 (0.61)	2.7 (1.4)	0.127
BASDAI, mean (SD)	3.2 (2)	4.7 (2.4)	0.02
BASFI, mean (SD)	2.2 (2.1)	3.4 (2.9)	0.082
BASMI, mean (SD)	1.9 (1.2)	2.2 (1.5)	0.539
HLA B27, % (n)	67% (20) (30/33)	14% (2) (14/27)	0.001
CRP, median (IQR)	3.5 (1.3-12.5)	4 (1.6-9.4)	0.955
CRP >5 n (%)	16(48.5)	14 (52)	0.795
NSAIDs, n %	31 (94)	27 (100)	0.193
Corticosteroids, n(%)	7(21)	11 (41)	0.101
Methotrexate, n (%)	3 (9)	15 (56)	0.001
Leflunomide, n %	1 (3)	2 (7)	0.439
Sulfasalazine, n %	1 (3)	0	0.362
Previous biological treatment, n %	0	3 (11)	0.014

**Image 2:**

Table 3	PsA		P value	SpA		P value
	sternal edema + (n=7)	sternal edema - (n=20)		sternal edema + (n=13)	sternal edema - (n=19)	
BASDAI mean (SD)	4.9 (1.7)	4.6 (2.4)	0.84	3.1 (2.0)	3.3 (2.1)	0.79
CRP mean (SD)	11.9 (9.4)	17.4 (44.9)	0.77	9.3 (9.4)	7.8 (9.7)	0.67
(SD)	3.8 (2.5)	3.3 (3)	0.68	2.7 (2.5)	1.9 (1.7)	0.27
SPARCC mean (SD)	3.7 (6.5)	4.5( 9.5)	0.83	18.3 (20.3)	8.3( 12.1)	0.09
CANDEN mean (SD)	6.8 (7)	7.95( 9.4)	0.78	14.7 (14.8)	8.3 (7.7)	0.11
DAS 28 CRP mean (SD)	3.4 (1.7)	2.5 (1.3)	0.18	2.2 (0.7)	1.9 (0.56)	0.41
Arthritis at the time of the MRI	71%	65%	0.56	31%	15%	0.28

**Conclusion:** The prevalence of sternal edema was high in both SpA and axial PsA. There was no correlation of this feature with clinical or imaging activity.

**Disclosure of Interest:** None Declared



**Keywords:** enthesitis, Psoriatic Arthritis, Spondyloarthritis

## PANLAR 2024

### Vasculitis and related diseases

#### PANLAR2024-1214

### Validation Of The Anca-Associated Vasculitis Patient Reported Outcomes Questionnaire In A Latin American Vasculitis Cohort

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#### Has this paper been previously presented at another conference?: No

**Background/Objectives:** The ANCA-associated vasculitis (AAV) patient reported outcomes (AAV-PRO) questionnaire is a new PRO developed to capture how AAV and its treatment impact on the health-related quality of life (HRQoL) of the affected patients. The aim of this work is to validate the AAV-PRO questionnaire in a Latin America (Peru) AAV cohort.

**Methods:** We included patients from the Almenara Vasculitis cohort who had at least one visit between December 2022 and November 2023. Sociodemographic features, disease activity measured with the Birmingham Vasculitis Activity Score version 3 (BVASv3) score, damage measured with the Vasculitis damage index (VDI) score, as well as the AAV-PRO (Spanish version) and the Short Form 36 (SF-36) were obtained. The AAV-PRO includes six domains [organ-specific symptoms (OSS), systemic symptoms (SS), treatment side effects (TSE), social and emotional impact (SEI), concerns about the future (CF), physical function (PF)] with twenty-nine items; the score ranges from 0 to 100: the higher the value, the worse the HRQoL. Active/relapsing disease was defined by BVASv3  $\geq 1$ . Correlations between domains of the AAV-PRO and the SF-36, BVASv3 and VDI were evaluated using Spearman's correlation.

**Results:** Forty-eight patients were enrolled; 36 (75.0%) of them were women. Their age and disease duration were 57.4 (13.5) and 5.1 (5.0) years, respectively. The BVASv3 and VDI scores were 4.7 (7.9) and 2.5 (1.7), respectively; patients with active/relapsing disease were 22 (45.8%). As to the SF-36, physical component summary (PCS) and mental component summary (MCS) were 44.5 (16.1) and 49.6 (16.1), respectively. As to the AAV-PRO domains, the scores for OSS, SS, TSE, SEI, CF, and PF were 35.4 (22.7), 48.4 (24.3), 39.4 (18.0), 49.2 (22.5), 53.1 (21.5), and 33.1 (22.6), respectively. Correlation analyses between the AAV-PRO and the SF-36 are depicted in Table 1. Overall, every domain of AAV-PRO correlated strongly with the global scores of the SF-36 (PCS and MCS) (all  $r \geq 0.405$  and  $p$  between 0.004 and  $<0.001$ ). There was no correlation between the AAV-PRO domains and either the BVASv3 or the VDI.

**Conclusion:** The AAV-PRO questionnaire, Spanish version, correlated with the SF-36 in AAV patients from a Latin American cohort (Peru). However, in our population, AAV-PRO did not correlate with activity or damage. These findings might endorse the use of AAV-PRO in other Latin American populations.

**Reference 1:** Robson JC, Dawson J, Doll H, et al. Validation of the ANCA-associated vasculitis patient-reported outcomes (AAV-PRO) questionnaire. *Ann Rheum Dis* 2018; **77**(8): 1157-64.



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**Reference 2:** Pimentel-Quiroz VR, Sanchez-Torres A, Acevedo-Vasquez E, et al. Demographic and Clinical Features of ANCA-Associated Vasculitides in a Peruvian Tertiary Center. *J Clin Rheumatol* 2021; **27**(6S): S246-S51.

**Disclosure of Interest:** None Declared

**Keywords:** health related-quality of life, patient-reported outcomes, VASCULITIS

## PANLAR 2024

### Infections (including COVID-19)

#### PANLAR2024-1223

### Proposal And Validation Of Robust Criteria For Defining A Chronic Chikungunya Population Based On Agreement Coefficients

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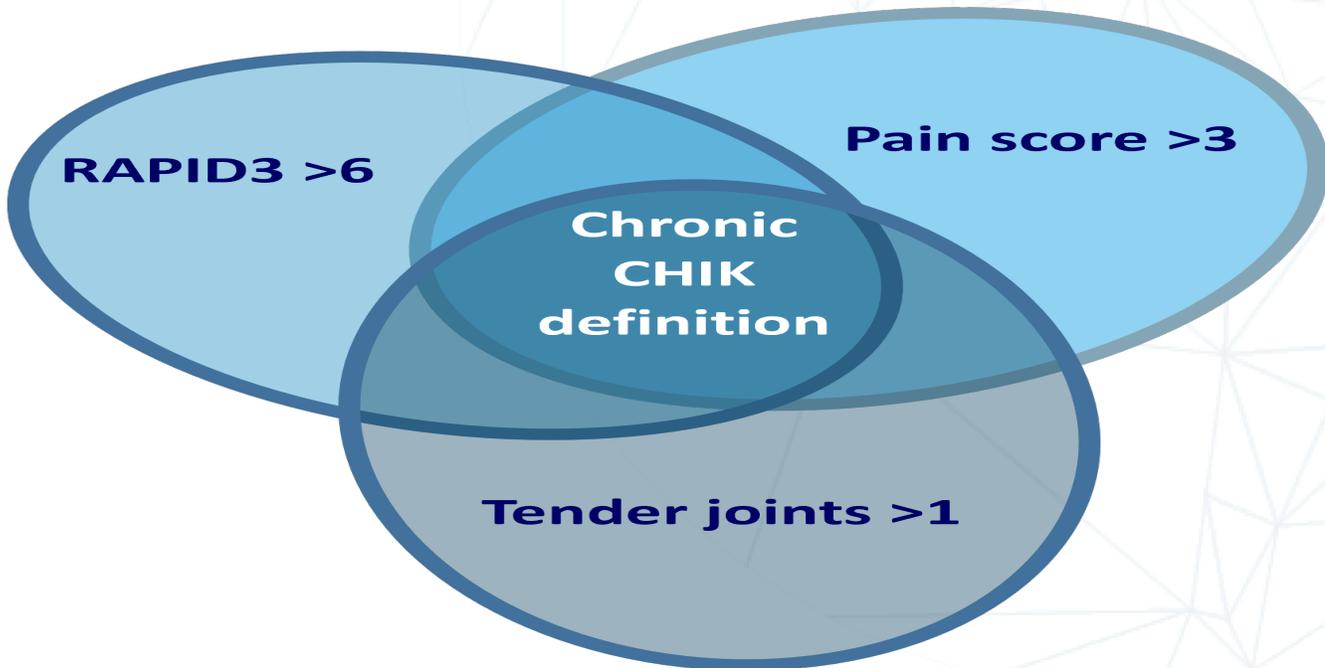
#### Has this paper been previously presented at another conference?: No

**Background/Objectives:** Chikungunya (CHIK) is a viral disease transmitted to humans by the Aedes mosquito. A chronic disease state with persistent arthralgia/arthritis and a profound impact on quality of life is reported in approximately 43% of infected individuals. There is no agreed method for identifying chronic subjects, but clinical joint evaluation, patient's pain perception, and overall health status have each been used. To minimise variability due to subjective clinical assessments, we implemented an analytical approach based on agreement coefficients for identifying chronic CHIK subjects.

**Methods:** A prospective study was conducted in Peru on 59 adults with acute CHIK. The number of tender joints out of 40 examined, pain (on a VAS scale), and the RAPID3 questionnaire were assessed and considered optimal predictors of chronic condition 3 months after infection. Thresholds representing the presence of persisting symptoms have been considered for each variable, and the Fleiss kappa and Gwet's AC1 agreement coefficients were calculated. Since there is no standard agreement about the chronic thresholds, all the possible combinations have been evaluated.

**Results:** The two analytical methods produced concordant results and identified threshold combinations with a high agreement (>0.75) between the three predictors. Five out of 2100 combinations resulted in the top five for both coefficients. The combination of tender joints >1, pain >3, and RAPID3 >6 (Figure) gave the most significant agreement averaging the two coefficients. This resulted in 19 subjects out of 59 (32%) classified as chronic CHIK. Comparison of musculoskeletal stiffness (MSQ) and the synovitis assessment performed by power doppler ultrasound score (PDUS) demonstrated a clear difference between chronic CHIK/non-chronic subjects, validating this classification. The MSQ and PDUS mean scores in the overall population were 3.4 (SD 9.05) and 3.3 (SD 4.24), respectively, versus 8.5 (SD 13.67) and 6.1 (SD 5.47) in the chronic subpopulation.

#### Image 1:



**Conclusion:** This analytical approach could be useful to define the subgroup of chronic subjects in a population affected by CHIK, reducing possible bias deriving from different subjective clinical evaluations. This method could also be applicable to different pathologies using different predictors.

**Disclosure of Interest:** H. Watson Shareholder with: Sanofi, Employee with: Evotec, A. Nizzardo Employee with: Evotec, C. Casamassima Employee with: Evotec, W. Silva-Caso: None Declared, R. Aquino-Ortega: None Declared, M. A. Aguilar-Luis: None Declared, Y. Tarazona-Castro: None Declared, F. Cabellos-Altamirano: None Declared, G. Calusi Employee with: Evotec, D. Federico Employee with: Evotec, M. Mandron Employee with: Evotec, J. Del Valle-Mendoza Grant / Research support with: Evotec, Sanofi

**Keywords:** Arthritis, Chikungunya, Diagnostic criteria

## PANLAR 2024

### Basic sciences

#### PANLAR2024-1260

#### Differential Influence Of Anti-Tnf $\alpha$ And Anti-IL17 Treatments On Gut Microbiome In Spondyloarthritis Patients

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#### Has this paper been previously presented at another conference?: No

**Background/Objectives:** The advent of biological therapies represented a crucial advancement in Spondyloarthritis (SpA) management. Experimental data have demonstrated the connection between the gut microbiome and SpA. The aim was to evaluate the effect of anti-TNF $\alpha$  and anti-IL17 therapies on the gut microbiome of SpA patients.

**Methods:** Stool samples were collected from 10 SpA patients at baseline and at 3 months, and from 25 healthy controls(HC) at baseline. DNA was extracted, genomic libraries targeting the 16S rRNA gene were prepared and amplicon sequencing was performed (MiSeq) for microbiome analysis and *in silico* inference of metabolic pathways, SpA patients were categorized based on before and after treatment with anti-TNF or anti-IL17.

**Results:** Analyses showed significant variations in alpha diversity between the HC group and pre-TNF group. Meanwhile, distinctions in beta diversity were observed between the HC group and post-TNF group. No significant differences were detected between HC with pre-IL17 and post-IL17 groups. Based on clinical evaluation, only one SpA-patient did not respond to anti-TNF $\alpha$  treatment. In this non-responder, richness and diversity indices decreased significantly (~30%), while responders showed significant increases (up to ~50%). Compared to HC, pre-TNF patients exhibited a significant decrease in the relative abundances of families previously associated with protective effects. Notably, these taxa were restored to control levels in post-TNF patients. Regarding metabolomics prediction, TNF-treatment responders exhibited reduced synthesis of fecal amino acids that have been positively correlated with Crohn's disease activity. In addition, there was an increase in glycogen degradation, providing a greater supply of carbon sources to support bacteria proliferation. In the anti-TNF non-responder, there was a decrease in pathways related to the synthesis of purines/pyrimidines, membrane, and cell wall, consistent with reduced bacterial richness. Simultaneously, there was an increase in the degradation of monosaccharides modifying lipids and proteins, potentially exacerbating the immune response.

**Conclusion:** These results suggest that gut microbiome dysbiosis in SpA patients can be restored, especially in responders, after anti-TNF- $\alpha$  treatment, but not after IL-17 treatment. The three-month period established for clinical evaluation was sufficient for the onset of gut microbiome stabilization in those treated with anti-TNF.

**Reference 1:** Liu B, Yang L, Cui Z, Zheng J, Huang J, Zhao Q, et al. Anti-TNF- $\alpha$  therapy alters the gut microbiota in proteoglycan-induced ankylosing spondylitis in mice. *Microbiologyopen*. 2019 Dec 26;8(12):1–10.



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**Disclosure of Interest:** None Declared

**Keywords:** Microbiome, Dysbiosis, biological therapy

## PANLAR 2024

### Epidemiology (including socioeconomic, socio-cultural and gender equity studies)

#### PANLAR2024-1261

#### Interchangeability Controversies In The Biosimilars Use: Brazilian Rheumatologists And Gastroenterologists'

##### Opinions

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##### Has this paper been previously presented at another conference?: Yes

**Background/Objectives:** Introduction: this study evaluated the knowledge and position of Brazilian rheumatologists and gastroenterologists about biosimilars.

**Methods:** Analysis of the response to questionnaire on respondents' sociodemographic data, concepts and prescription of biosimilars, and degree of satisfaction regarding scientific information received by the Brazilian Society of Rheumatology (SBR), Brazilian Inflammatory Bowel Disease Study Group (GEDIIB) and manufacturers of these drugs. Inventory answered in September 2022 through the GoogleForms platform.

**Results:** The sample contemplated 347 respondents rheumatologists (59.6%) and gastroenterologists (40.4%). The median age was 46 (38-60) years with 60% living in the southeastern region of Brazil. Most respondents (84.3%) would prescribe a biosimilar. Among non-prescribers, the main reason given in both specialties was lack of confidence in these medications (67.2%), followed by lack of non-inferiority clinical studies (38.2%) and scarcity of information (36.4%). The main reasons for prescription were proof of efficacy, safety and lower cost (30.3%) followed by availability by the health manager (23.3%). Patients who had not received immunobiological treatment before were the group of choice for the use of biosimilars (68.8%) for respondents. One hundred and twenty-six (60.6%) rheumatologists are in agreement with the exchange between biosimilars of the same molecule, however only 60 (43.2%) gastroenterologists are in agreement with the exchange ( $p < 0.001$ ). The ideal time to switch from the originator to the biosimilar was when the patient was stable or with the disease under control (59.1%). It was observed that 27.6% of the interviewees avoid making the switch, and most (64.2%) do not agree with the automatic switch without their prior consent. The specialists base their conduct on guidelines from SBR (49.0%), GEDIIB (36.8%), ANVISA (18.1%), FDA (19.0%) and EMA (16.3%). However, the majority of respondents (57%) are dissatisfied with the information received in scientific update channels and through manufacturers. Only 44 respondents (12.7%) are satisfied with the transparency in the production process of these drugs.



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**Conclusion:** Evaluation of the experts' opinion was important for us to know the main doubts, questions and positioning regarding biosimilars. It is noteworthy that the main reasons for not prescribing biosimilars were the lack of confidence and information.

**Disclosure of Interest:** None Declared

**Keywords:** None

## PANLAR 2024

### Epidemiology (including socioeconomic, socio-cultural and gender equity studies)

#### PANLAR2024-1265

#### Limited Access To Conventional Dmards In Patients With Rheumatoid Arthritis In A Public Hospital

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#### Has this paper been previously presented at another conference?: No

**Background/Objectives:** Background. The treatment of rheumatoid arthritis (RA) is focused on avoiding structural damage with the early initiation of conventional and/or biologic disease-modifying drugs (DMARDs). However, access to these is still limited in some Latin American countries. According to the World Health Organization, Catastrophic and High-Cost Diseases are those diseases whose treatment involves a direct cost > 40% of household income. **OBJECTIVE.** To determine access to disease-modifying drugs in patients with rheumatoid arthritis in a public hospital.

**Methods:** This is a descriptive, cross-sectional study in a public hospital in Bolivia. Most commonly used DMARDs: Methotrexate (MTX), Leflunomide (LFN), Hydroxychloroquine (HCQ). Low socioeconomic level (LSL): Graffar IV – V. Out-of-pocket expenditure in DMARDs (OPE): expenditure expressed as a percentage made by the patient in relation to his or her salary, non-reimbursable. Positive access DMARDs: demonstrates possession of a drug in sufficient quantity to comply with pharmacotherapy. Negative access: Does not meet positive access criteria. Analysis. EPIINFO Program.

**Results:** 125 patients. 95 (76%) were female. Age: 56 years (21.2 – 77). Marital status: 64% married, level of education: Primary or less 49%, secondary or over 51%. 54.4% had no source of work. Income: \$273 (\$28 – \$689). 10.4% revenue <\$100, 67.2% <\$300. LSL: 61.6%. Comorbidities: diabetes mellitus (24%), hypertension (20.8%). Average Charlson Index (CI): 1.48 ±1.14. Average monthly expenditure 1 DMARD=35 dollars, 2 or more DMARDs=199 \$. Use of DMARDs: MTX 74.4%, LFN 21.6%, HCQ 4%. DMARDs dispensed in Hospital pharmacy 0%. OPE: 100% of the cost of the DMARD, which on average represents 12.8% of the average income if they were with 1 DMARD or 72.8% if they were with 2 or more DMARDs. Negative access to DMARD: 74.4%, being related to higher CI compared to those with negative access (mean 1.63 vs 1.18, p <0.05). Patients with negative access to DMARDs had a higher DAS28 and HAQ vs. those with positive access (Negative access = DAS28 4.6±1.3, HAQ 1.13±0.52 p<0.05. Positive access: DAS28 3.6±1.6, HAQ 0.7±0.65 p<0.05).

**Conclusion:** Access to DMARDs is negative in the majority of RA patients treated in the public health system. The public health system does not provide access to any type of DMARDs, which means that patients with RA evolve with persistent activity, progressive damage and permanent disability.

**Disclosure of Interest:** None Declared

**Keywords:** ACCESS, DMARDs, rheumatoid arthritis



## PANLAR 2024

### Vasculitis and related diseases

#### PANLAR2024-1271

#### Predictive Factors Of Relapse In Giant Cell Arteritis Treated With Tocilizumab

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#### Has this paper been previously presented at another conference?: Yes

**Background/Objectives:** Clinical trial with TCZ in GCA was performed with intravenous (iv) TCZ in phase 2 trial, and with subcutaneous (sc) TCZ in phase 3 GiACTA. There is general agreement on initial/ maintenance dose, but duration of therapy is not well established. The objective is to assess predictive factors for relapse in GCA

**Methods:** Multicentre observational study of 471 patients with GCA. Diagnosis of GCA performed according to ACR criteria, and/or temporal artery biopsy, and/or imaging techniques. Relapse defined according to EULAR consensus definition. From 471 patients, those with available the data on relapse were selected. Multivariable study conducted to identify best set of predictors for relapse.

**Results:** GCA relapses were observed in 63 of 405 (15%) patients for whom data available (**Table**). No significant differences were observed between groups in demographic, clinical and laboratory characteristics or prednisone dose at initiation of TCZ. Set of variables associated with GCA relapses were prior use of scDMARDs, use of iv.TCZ, shorter time on TCZ therapy and optimization of TCZ dose (**Figure**).

**Table 1:**

	No relapsing GCA (n=342)	Relapsing GCA (n= 63)	P
Age at GCA diagnosis (mean±SD)	72±9	70±9	0.12
Women/Men (% de women)	246/96 (72)	47/16 (75)	0.57

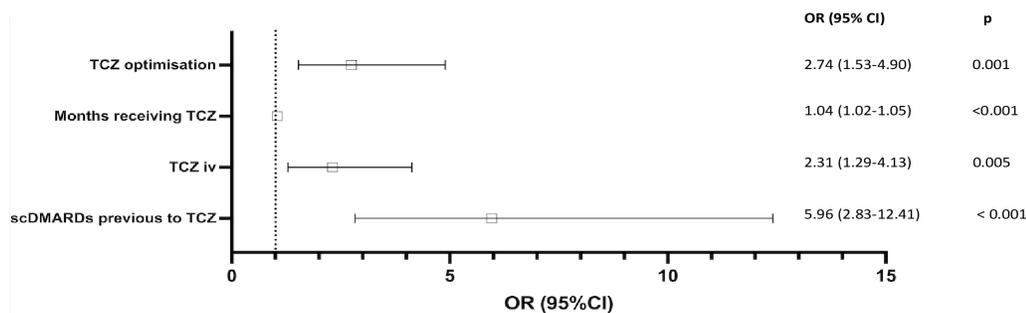


<b><i>Phenotype</i></b>			
cGCA	152 (44)	31 (48)	0.63
ecGCA	62 (18)	12 (18)	0.95
mixGCA	128 (37)	22 (34)	0.58
<b><i>Ischemic manifestations</i></b>			
Headache, n (%)	189 (55)	36 (58)	0.70
Jaw claudication, n (%)	84 (26)	11 (19)	0.25
Visual manifestations, n (%)	56 (16)	13 (20)	0.48
<b><i>Systemic manifestations</i></b>			
Fever, n (%)	39 (11)	12 (19)	0.11
Constitutional syndrome, n (%)	139 (41)	27 (42)	0.83
PmR, n (%)	210 (62)	43 (68)	0.32
<b><i>Previous treatment</i></b>			
scDMARDs, n (%)	171 (50)	53 (82)	<0.001
bDMARDs, n (%)	4 (1)	4 (6)	<0.001
<b>Prednisone dose (mg/day), median [IQR]</b>	20 [10-40]	20 [10-30]	0.86

<b>TCZ</b>			
IV/SC, (%IV)	171/171 (50)	45/18 (69)	0.004
Mono/combo, (%mono)	263/79 (77)	43/20 (66)	0.066
Optimization, n (%)	123 (39)	38 (62)	<0.001
<b>Months receiving TCZ</b>	27 [18-43]	4 [2-12]	<0.001

**Abbreviations:** bDMARDs: biologic disease-modifying antirheumatic drugs, GCA: giant cell arteritis, CRP: C-reactive protein, ESR: erythrocyte sedimentation rate, IQR: interquartile range [25th-75th], scDMARDs: synthetic conventional disease-modifying antirheumatic drugs, SD: standard deviation

**Image 1:**



**Conclusion:** GCA relapse seems related mainly to TCZ schedule and was associated with iv TCZ, a shorter treatment time and optimization.

**Disclosure of Interest:** None Declared



**Keywords:** None

## PANLAR 2024

### Rheumatoid arthritis

#### PANLAR2024-1274

#### Biomarkers Of Immunothrombosis In A Cohort Of Rheumatoid Arthritis Patients In A Regional Hospital In Mexico

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#### Has this paper been previously presented at another conference?: No

**Background/Objectives:** Patients with Rheumatoid arthritis (RA) and persistent disease activity are distinguished by persistent pain, polyarthritis or extra-articular symptoms. Currently, thromboinflammation has been described as a process of interconnection between the immune system and hemostasis. Anti-CCP circulating in a patient with RA are recognized by platelet receptors generating platelet and coagulation pathway activation, but it has not been studied whether its correlate with the state of disease activity in patients with RA.

**Methods:** Cross-sectional clinical study, conducted at the Morelia Regional Hospital, in patients diagnosed with RA. Patients were interviewed, clinically evaluated, plasma and serum were obtained where immunothrombosis biomarkers were measured by immunoassay and analyzed by flow cytometry.

**Results:** We included 90 patients, Table 1 shows the sociodemographic characteristics, they were classified into treatment groups. We measured Interlecin 6, 3637.76pg-ml (3074-5586,  $\pm 99.102$ ), p-Selectin 1494. 24 pg-ml (668-941.95 $\pm$  93.23), D-Dimer 2357.40 (308-11210,  $\pm 580.39$ ), PSGL1 4939.02 (3143-10241,  $\pm 289.433$ ), tPA 5123.70 (13.70-1277.30,  $\pm 825.48$ ). The platelet function was evaluated, Image 1 shows the expression of p Selectin and glycoprotein IIbIIIa. And in image 2 we can observe representative plots of the pallet activity by group.

#### Table 1:

Variable	All of groups (min-max, SD)	Interval Reference
Patient N (%)	90 (100%)	NA
Age, years	42.57 (32-56, 10.53)	NA
Sex, female	22	NA
Time of symptom onset, years	12 (3-21, 9.83)	



<b>Time of diagnosis, years</b>	<b>11.25 (3-20, 8.99)</b>	
<b>Weight kg</b>	<b>67.80 ( 51-85, 12.05)</b>	
<b>BMI</b>	<b>27.81 (19-35.50, 5.56)</b>	
<b>Leucyte 10<sup>6</sup> /MI</b>	5.03 (3.2-7.8, 1.8)	4.7-6.1
<b>Hemoglobin g-dL</b>	13.6 ( 12.10-14.30, 1.02)	13.5-17-5
<b>DAS 28</b>	3.81 (3.53-4.53, .479)	
<b>Rheumatoid Factor UI-ml</b>	267.80 (7-1024, 504.26)	< 14
<b>Anti citrullinated cyclic peptideUI-ml</b>	79.20 (2-300, 147.225)	< 5
<b>ESR mm/hr</b>	36.50 (15-46, 14,57)	0-19
<b>CRP mg/DI</b>	10.5 (2-31, 13.77)	0-1
<b>Platelets 10<sup>3</sup> /MI</b>	231 (139-323, 75.12)	130-400

**Image 1:**

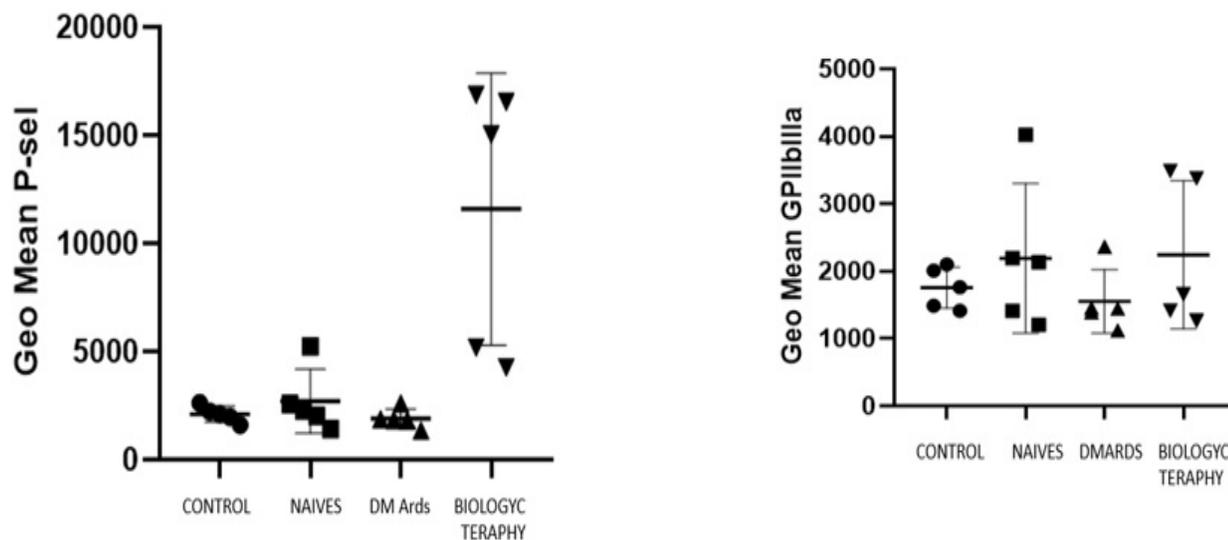
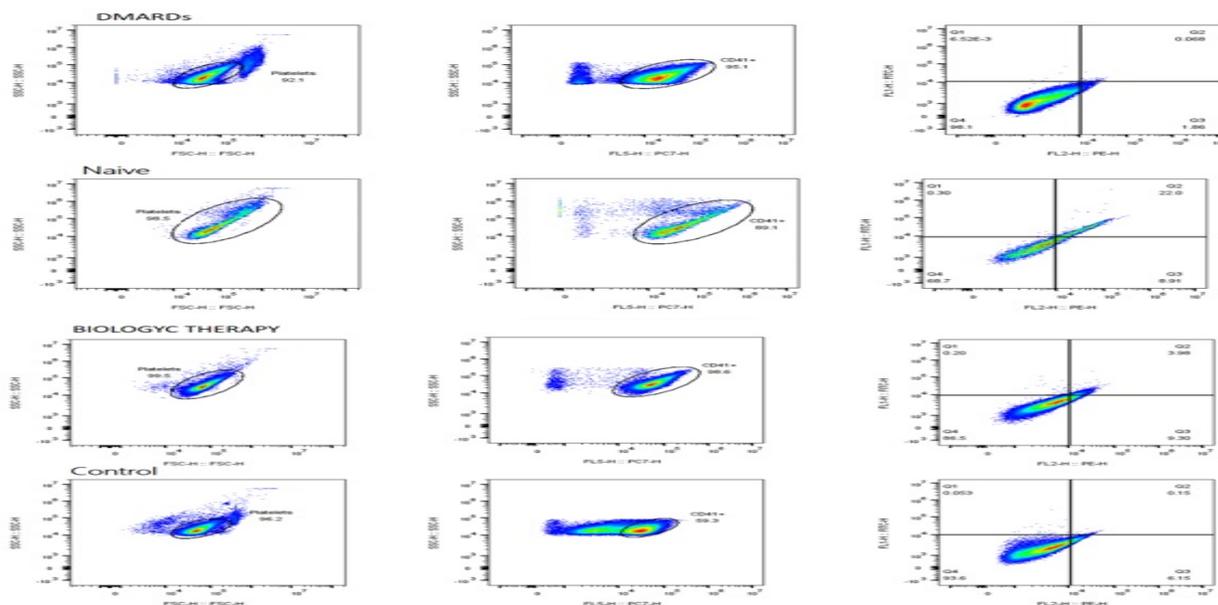


Image 2:

REPRESENTATIVE PLOTS OF PLATELET ACTIVITY BIOMARKERS EXPRESSION



**Conclusion:** Immunothrombosis biomarkers are increased in patients with RA, and their levels correlate linearly with the degree of disease activity, so we consider that the thromboinflammatory process is active in this population and this can be considered as a pathophysiological pathway parallel to the classical pathways described in RA, so it is necessary to conduct further studies and increase the population included.



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**Disclosure of Interest:** None Declared

**Keywords:** Immunothrombosis, rheumatoid arthritis

## PANLAR 2024

### Psoriatic arthritis

#### PANLAR2024-1285

#### Association Between Subclinical Atherosclerosis And Psoriasis To Psoriatic Arthritis Transition Onset.

Maria F. Elizondo-Benitez\*<sup>1</sup>, Andrea L. Guajardo-Aldaco<sup>1</sup>, Jose R. Azpiri-Lopez<sup>2</sup>, Dionicio A. Galarza-Delgado<sup>1</sup>, Iris J. Colunga-Pedraza<sup>1</sup>, Jesus A. Cardenas-DeLaGarza<sup>1</sup>, Rosa I. Arvizu-Rivera<sup>1</sup>, Valeria Gonzalez-Gonzalez<sup>1</sup>

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#### Has this paper been previously presented at another conference?: No

**Background/Objectives:** To determine the association between subclinical atherosclerosis and the transition onset from PsO to PsA.

**Methods:** Cross-sectional, observational, and comparative study of patients with PsA who met the 2006 CASPAR, aged  $\geq 18$  years. Exclusion criteria: overlapping syndromes, a history of major cardiovascular events, and pregnant individuals. The age of onset was defined through clinical history and the patients were paired by age and divided, accordingly, into two groups: patients with concurrent PsO and PsA ( $\leq 1$  year) and patients with psoriasis before PsA ( $>1$  year). A blinded radiologist conducted carotid ultrasounds in B-mode to identify subclinical atherosclerosis. Group distribution was assessed with the Kolmogorov-Smirnov test, and statistical comparisons were performed using the Chi-square test, Kruskal-Wallis, Student's t-test, and the U-Mann Whitney Test, accordingly. A  $p$ -value of  $\leq 0.05$  was considered statistically significant.

**Results:** Fifty-two PsA patients (55.7% women, mean age  $55.5 \pm 12.2$  years) were included, with a mean transition interval from PsO to PsA of  $5.3 \pm 7.9$  years. Dyslipidemia (44.2%) was the most prevalent cardiovascular comorbidity. No significant differences in traditional cardiovascular risk factors were observed between groups. However, a notable distinction emerged in subclinical atherosclerosis, with the concurrent PsO and PsA group showing a higher prevalence of carotid plaque (50% vs 23%,  $p=0.007$ ) (Table 1).

**Table 1:** Table 1. Demographic characteristics.

Characteristics	Concurrent PsO and PsA (n=26)	PsO before PsA (n=26)	<i>P value</i>
Age, years, mean $\pm$ DE	57.1 $\pm$ 12.6	53.8 $\pm$ 11.8	NS

Age during transition, mean $\pm$ DE	45.4 $\pm$ 12.3	45.41 $\pm$ 11.7	NS
Interval of transition, years median (IQR)	0 (0-0)	7.5 (4.1-14.5)	<b>&lt;0.001</b>
PsO disease duration, median (IQR)	10 (4.6-11)	14 (8.5-22.7)	<b>0.016</b>
PsA disease duration, years, median (IQR)	10 (5-12)	6.5 (2-10.7)	NS
DAS28CRP, mean $\pm$ SD	2.41 $\pm$ 1.43	2.96 $\pm$ 1.69	NS
DAPSA, mean $\pm$ SD	14.1 $\pm$ 17.5	16.1 $\pm$ 19.7	NS
Carotid plaque, n (%)	13 (50)	6 (23.0)	<b>0.044</b>

PsO, psoriasis; PsA, psoriatic arthritis; DAS28CRP, disease activity score 28-c reactive protein; DAPSA, disease activity index for psoriatic arthritis; IQR, interquartile range.

**Conclusion:** Concurrent PsO and PsA patients show unique traits and higher cardiovascular risk than those with PsO preceding PsA. This categorization could carry significant implications for epidemiological research on the prognosis of psoriatic disease and might offer potential focal points for the prevention of PsA and its cardiovascular implications.

**Disclosure of Interest:** None Declared

**Keywords:** atherosclerosis, Cardiovascular Disease, Prognosis

## PANLAR 2024

### Systemic lupus erythematosus

#### PANLAR2024-1287

### Echocardiographic Abnormalities With The Presence Of Proteinuria In Patients With Systemic Lupus Erythematosus.

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#### Has this paper been previously presented at another conference?: No

**Background/Objectives:** To associate echocardiographic abnormalities in patients with SLE and proteinuria.

**Methods:** Cross-sectional study, including SLE patients meeting ACR/EULAR 2019 criteria, aged  $\geq 18$  years, excluding those with overlapping syndromes, major cardiovascular events, chronic kidney disease, and pregnant individuals. Patients were categorized by proteinuria levels reported in urinalysis (10 mg/dl, 30 mg/dl, 300 mg/dl). Transthoracic echocardiograms were performed by a cardiologist, blinded to clinical information. The evaluation included left ventricular mass index (LVMI), relative wall thickness (RWT), mitral deceleration time (MDT), E/E mitral, E/A mitral, tricuspid annular plane systolic excursion (TAPSE), left ventricular ejection fraction (LVEF). Left ventricular-Global Longitudinal Strain (GLS) was evaluated and a value higher than -18% was classified as subclinical left ventricular systolic dysfunction. Group distribution and comparisons were assessed using the Shapiro-Wilk, Chi-square, and Kruskal-Wallis tests, accordingly. A P-value of  $\leq 0.05$  was considered statistically significant.

**Results:** Twenty SLE patients with proteinuria (75.0% women, mean age  $32.3 \pm 11.8$  years) were studied. No difference in traditional cardiovascular risk factors was observed. Higher SLEDAI was noted in those with 300 mg/dl proteinuria vs 10 or 30 mg/dl (6.0 vs 6.5 vs 16.0,  $p=0.026$ ). Lower LVEF was found in the 30 mg/dl group compared to 10 and 300 mg/dl (61.0 vs 52.0 vs 66.0,  $p<0.001$ ). GLS mean  $\pm$  SD values categorized the 30 mg/dl group as subclinical left ventricular dysfunction (-20.6 vs -15.0 vs -19.1,  $p=0.039$ ). Post-Hoc analysis revealed significant GLS differences between the 10 and 30 mg/dl groups (-5.61, Bonferroni  $p=0.036$ ) and SLEDAI of 10 vs 300 mg/dl (-10.0, Bonferroni  $p=0.034$ ). No significant differences were observed in the other echocardiographic parameters (Table 1).

**Table 1:** Table 1. Echocardiographical parameters.

	10 mg/dl (n=9)	30 mg/dl (n=4)	300 mg/dl (n=7)	<i>P value</i>
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LVEF, median (IQR)	61.0 (59.0-63.0)	52.0 (50.2-53.5)	66.0 (65.0-66.0)	<b>&lt;0.001</b>
GLS, mean $\pm$ SD	-20.6 $\pm$ 3.6	-15.0 $\pm$ 3.5	-19.1 $\pm$ 2.7	<b>0.039</b>
Subclinical Systolic Dysfunction, n (%)	6 (66.6)	1 (25.0)	5 (71.4)	NS

SLEDAI, systemic lupus erythematosus; LVEF, left ventricular ejection fraction; GLS, global longitudinal strain; NS, not significant.

**Conclusion:** Proteinuria is an important marker of cardiovascular dysfunction, prompting the need for screening in this population. Echocardiography greatly complements cardiovascular assessment in SLE patients.

**Disclosure of Interest:** None Declared

**Keywords:** Cardiovascular risk, kidneys, SLE

## PANLAR 2024

### Sjogren's and other systemic autoimmune diseases

#### PANLAR2024-1291

### Clinical Features And Immunosuppressive Treatment In Patients With Connective Tissue Disease Associated Interstitial Lung Disease. Data From Epimar 2 Registry.

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#### Has this paper been previously presented at another conference?: Yes

**Background/Objectives:** Interstitial lung disease (ILD) is one of the clinical manifestations of various autoimmune disease (AI). Treatment is based on immunosuppressive drugs and antifibrotic agents according to the patient's clinical characteristics. We aim to describe the clinical, serological, and treatment characteristics in patients with CTD-AI.

**Methods:** EPIMAR 2 is a real-life registry of CTD-ILD patients, prospective, observational, and multicenter in Argentina. It includes patients with CTD-AI with ≤5 years of evolution, defined by findings on high-resolution computed tomography. Patients are classified into 3 subgroups: ILD associated with connective tissue disease (ILD-CTD), interstitial pneumonia with autoimmune features (IPAF), or ILD associated with antineutrophil cytoplasmic antibodies (ILD-ANCA).

**Results:** A total of 168 patients were included, 82.1% were women, with a median age of 63 (54-71) years. The majority (59.7%) never smoked. The ILD-AD subtypes were: 142 (84.5%) ILD-CTD, 18 (10.7%) IPAF, and 6 (3.6%) ILD-ANCA. Among ILD-CTD patients, 54 (38.3%) had scleroderma, 51 (36.2%) rheumatoid arthritis, 15 (10.6%) inflammatory myopathies, 24 (17.1%) Sjogren's, and 6 (31.6%) ANCA-associated vasculitis. FVC values (liters and %) were 2.23 (SD 0.08) liters and 71.4% (SD 20), respectively. Baseline DLCO was 17.1 (SD 12.1) ml/min/mmHg. 33% presented subclinical disease. When divided by diagnosis of ILD-CTD, IPAF, and ANCA, the frequencies of subclinical disease were 35.8%, 11.1%, and 50%, respectively. The diagnostic delay was greater in ILD-ANCA patients with a median in months of 10.0 [8.50, 16.0] vs. 3.50 [1.00, 12.0] for ILD-CTD and 3.00 [2.00, 5.50] for IPAF. The most used immunosuppressive medication was corticosteroids (78%), followed by mycophenolate (43%) and cyclophosphamide (20%).

**Conclusion:** We present multicenter data from patients in Argentina from the EPIMAR 2 registry. The majority had a defined autoimmune disease diagnosis, with scleroderma being the most frequent. One third of patients presented subclinical disease. Although we have a small ILD-ANCA group, we observed that in this group, subclinical disease and diagnostic delay are greater. Regarding treatment regimens, mycophenolate, was the most used drug after



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corticosteroids. Similar percentages of cyclophosphamide and rituximab use were found. Early screening for ILD is needed in all patients with autoimmune diseases to shorten the diagnostic delay for timely intervention.

**Disclosure of Interest:** None Declared

**Keywords:** autoimmune disease, immunosuppression therapy, interstitial lung disease

## PANLAR 2024

### Spondyloarthritis

#### PANLAR2024-1293

#### Sustained Remission Or Sustained Low Disease Activity For At Least One Year In Patients With Axial

#### Spondyloarthritis: Achievable Objectives In Daily Practice?

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#### Has this paper been previously presented at another conference?: Yes

**Background/Objectives:** The aim of this study was to determine the frequency of sustained remission (SR) or sustained low disease activity (LDAS) for at least one year in patients with AxSpA and analyze the factors associated with this state.

**Methods:** Multicenter, observational, analytical, retrospective cohort study. Patients with a diagnosis of AxSpA were included. A review of medical records was carried out. RS was considered if: inactive disease (ASDAS-PCR <1.3) and/or BASDAI < 2 and a normal CRP, and sustained low disease activity if: LDA (ASDAS-PCR ≥1.3 and < 2.1) and/or BASDAI < 4 and a normal CRP, for at least one year with at least two consecutive visits separated by at least 3 months.

Categorical variables were compared using the Chi2 test and continuous variables using the Student or Mann Whitney test. A multiple logistic regression was performed.

**Results:** 122 patients were included (Table 1), 96% of patients are under treatment with bDMARDs, 45% (n=55) achieved SR, 31% (n=38) LDA and 24% (n=29) never achieved any of these states in a sustained manner. Of the 93 patients who achieved RS/LDAS, only 26 (28%) optimized treatment, this strategy being more frequent in patients with RS (41%) vs LDAS (11%), p: <0.001. The median time in remission was 24 months (IQR 30). In the logistic regression analysis, lower baseline activity was independently associated with achieving RS/LDASS OR 0.40 p 0.005 CI 95% 0.2-0.75.

**Table 1:** Table 1. Characteristics of the included patients and differences between patients who achieved RS/LDAS vs those who never achieved it.

Variables	Total	RS/LDA	Never RS/LDA	p
	N=122	N=93	N=29	



<b>Male n (%)</b>	<b>93 (76.2)</b>	<b>55 (59)</b>	<b>11 (38)</b>	<b>0.045</b>
<b>Age mean (SD)</b>	<b>46.45 (15)</b>	<b>48 (15)</b>	<b>40 (13)</b>	<b>0.016</b>
Level of education median (IQR)	14 (5)	14 (3.5)	12 (4)	0.05
<b>Time of evolution of the disease (month) median (IQR)</b>	<b>24 (94)</b>	<b>66 (110)</b>	<b>36 (107)</b>	<b>0.021</b>
Diagnostic delay (meses) median (IQR)	24 (RIC 94)	24 (112)	24 (56)	0.45
BMI median (IQR)	26 (6)	24.8 (5)	26 (6)	0.72
Smoking actual n (%)	9 (7.4)	6 (6.5)	3 (10)	0.48
HLA-B27 Positive n (%)	55/109 (50.5)	39/84 (46.4)	16/25 (64)	0.17
<b>edema on MRI ASAS positive n (%)</b>	<b>95 (84)</b>	<b>76 (90.5)</b>	<b>19 (65.5)</b>	<b>0.003</b>
<b>ASDAS-ers baseline media (SD)</b>	<b>2.36 (1.3)</b>	<b>1.9 (1)</b>	<b>3.56 (1.2)</b>	<b>&lt;0.001</b>
<b>ASDAS-PCR baseline media (SD)</b>	<b>2.43 (1.5)</b>	<b>1.94 (1.9)</b>	<b>3.85 (1.3)</b>	<b>&lt;0.001</b>
Radiographic axSpA n (%)	85 (70)	67 (72)	18 (62)	0.23



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Fibromialgia n (%)	14 (11.5)	7 (7.5)	7 (24)	0.02
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**Conclusion:** RS/LDAS was an achievable goal in almost 3 out of 4 patients. Higher baseline disease activity is associated with fewer possibilities of achieving these targets.

**Disclosure of Interest:** None Declared

**Keywords:** Real world data, remission

## PANLAR 2024

### Miscellaneous

#### PANLAR2024-1294

### Gait Speed And Risk Of Cognitive Impairment In Older Adults With Rheumatic Diseases (Cognitive Motor Risk Syndrome)

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#### Has this paper been previously presented at another conference?: No

**Background/Objectives:** **BACKGROUND.** Gait speed has been used as a marker for adverse events, including the presence of sarcopenia, disability, hospitalization, risk of falls, and mortality. Recently, slow walking speed has been linked to the risk of cognitive impairment and cognitive motor risk syndrome in older adults. Determining a predictor of cognitive impairment in older adults with rheumatic diseases by evaluating motor and cognitive domains is important, since cognitive impairment is related to increased morbidity and mortality and poor therapeutic adherence. **OBJECTIVES.** To determine whether gait speed is related to the risk of cognitive impairment in older adults with rheumatic diseases.

**Methods:** Descriptive, cross-sectional study. Patients over 60 years of age treated in outpatient rheumatology clinics were included. The gait speed (GS) of 4 meters was evaluated. The GS was calculated: 4 mts/duration in seconds. Low GS : <0.8 mts/second. Probable cognitive impairment (CI) was assessed with the Moca Test (CI ≤25) or the Minimental TEST (CI ≤ 24).

**Results:** A total of 53 patients were included. 45 (84.9%) were female. Average age of 67 years. Levels of Education: more frequent: Elementary: 22 (41.51%), Middle School 10 (18.87%), High School 11 (20.75%). 24 (45.28%) patients were retired, the rest were still active. The most frequent rheumatic diseases were rheumatoid arthritis (45.2%), knee osteoarthritis (43.3%), and hand osteoarthritis (30.1%). The most frequent comorbidities were hypertension in 62.2% and diabetes mellitus in 30.1%. GS was low in 41 patients (77.36%), with no relationship between the base disease. Medium GS: 0.61 (0.2 – 1.2). Cognitive impairment was observed in 25 patients (47%). GS was slower in patients with cognitive impairment vs. those without cognitive impairment (0.66 vs. 0.51) p=0.03.

**Conclusion:** Gait speed is a simple, useful accessible parameter to determine probable cognitive impairment in older adults with rheumatic diseases.

**Disclosure of Interest:** None Declared

**Keywords:** Cognitive Impairment, gait speed, rheumageriatrics

## PANLAR 2024

### Rheumatoid arthritis

#### PANLAR2024-1325

#### Sex Differences Concerning Central Sensitization In Patients With Rheumatoid Arthritis

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#### Has this paper been previously presented at another conference?: No

**Background/Objectives:** There is increasing evidence of sex differences regarding prevalence, pain intensity, or treatment efficacy in rheumatoid arthritis (RA). Women have a stronger proinflammatory response to tissue damage than men. Women also use different coping styles regarding pain and worse perception of pain are observed in women. RA women have more severe disease activity and pain scores. It is unclear if differences are related to the involvement of central sensitization (CS).

We aimed to assess differences in CS between men and women, with the hypothesis that CS is more pronounced in women than in men.

**Methods:** Cross-sectional study included 163 patients with RA diagnosis, according to the 2010 EULAR/ACR criteria. CS was determined using the Central Sensitization Inventory (CSI). To evaluate disease activity, we used the DAS-28-ESR, CDAI, SDAI. Physical function assessed by HAQ. Pain intensity was assessed by VAS. Statistical analysis was performed in MS Excel and SPSS 22.

**Results:** 34 men and 129 women were recruited for this study. Subject characteristics and general outcomes are summarized in Table 1. Compared with men, women had greater values of DAS28-ESR, CDAI, SDAI and HAQ (all  $p < 0.001$ ). Women with RA also reported higher pain intensity ( $p < 0.001$ ). Significant differences between men and women were observed for the manifestations of CS. Women scored significantly higher on the CSI vs men ( $p < 0.05$ ). Analyzing the CSI responses, women had worse values concerning physical symptoms ( $p < 0.05$ ), emotional distress ( $p < 0.05$ ), headache/jaw symptoms ( $p < 0.05$ ) were revealed. Women had a significantly higher prevalence of CS (41.8% versus 20.6%),  $p < 0.01$ .

**Table 1:** Characteristics and general outcomes of RA patients (M $\pm$ SD).

	Men, n=34	Women, n=129	p
Age, years	52.2 $\pm$ 14.7	53.1 $\pm$ 12.3	0.74
Disease duration	6.2 $\pm$ 5.3	9.1 $\pm$ 8.0	<0.05



VAS pain	6.1±1.5	7±1.3	<0.001
DAS28-ESR	4.6±1.1	5.4±0.9	<0.001
SDAI	29.5±8.7	37±10.2	<0.001
CDAI	27.1±8	33.9±9.8	<0.001
HAQ	0.8±0.7	1.4±0.7	<0.001
CSI	29.1±15	35.3±14	<0.05
physical symptoms	18.3±9.1	22.3±6.9	<0.05
emotional distress	6.1±3.9	8±4.5	<0.05
headache/jaw symptoms	3.7±3.1	5.1±2.8	<0.05
urological symptoms	2.5±2.2	3.1±2.1	>0.05

**Notes:** P – the significance of differences between groups.

**Conclusion:** In patients with RA, significant sex differences concerning of CS were observed. CS was more pronounced in women and associated with higher disease activity, functional disorders, and pain intensity. Therefore, sex differences should be taken into account in the management of pain in daily clinical practice and in pain research in patients with RA.

**Disclosure of Interest:** None Declared

**Keywords:** central sensitization, pain, rheumatoid arthritis

## PANLAR 2024

### Miscellaneous

#### PANLAR2024-1331

#### Polypharmacy And Its Clinical Implications In Older Adults With Rheumatic Diseases

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#### Has this paper been previously presented at another conference?: No

**Background/Objectives:** **BACKGROUND.** Polypharmacy (PP) is one of the most common geriatric syndromes that is related to negative clinical outcomes such as frailty, hospitalization, and mortality. Polypharmacy is also associated with drug interactions, producing pharmacokinetic and pharmacodynamic alterations, as well as an increased drug toxicity. It is important to identify patients who have polypharmacy interactions, and use the STOPP criteria to suspend potentially inappropriate medications in older adults. **OBJECTIVES.** To evaluate polypharmacy and its relationship with interactions, frailty, geriatric syndromes, and STOPP criteria in older adult patients with rheumatic diseases.

**Methods:** This is a cross-sectional, descriptive study. Patients  $\geq 60$  years old who attended rheumatology consecutively were included. PP:  $\geq 5$  drugs. Charlson index (CI). Frailty: Barthel index  $\geq 90$  + SPPB  $< 10$ . Geriatric syndromes. Interactions B, C, D, X. STOPP 2023 criteria.

**Results:** 53 patients, 84.9% female. Age 67 years  $\pm$  5.59. Rheumatoid arthritis (RA) 45.28%, Osteoarthritis (OA) knees 43.4%, OA hands 30.19%, Osteoporosis 11.32%, Sjögren's syndrome 9.43%. Diabetes mellitus 28.3%, hypertension 62.26%, dyslipidemia 15.09%, gastritis 13.21%, thyroid pathology 9.43%. Multimorbidity: 50.94%. Self-medication: 76.4%. PP: 66.04%, median drug count of 5 (1 - 11). PP was related to higher CI:  $3.8 \pm 1.15$  compared to patients without polypharmacy (CI:  $2.77 \pm 0.87$ ,  $p = 0.001$ ) and to more geriatric syndromes: 7 (3-12) vs no PP 4 (1-8) ( $p = 0.000$ ). Drugs in frailty: 6,  $13 \pm 2.54$ , vs non-frail  $4.9 \pm 2.6$ ;  $p > 0.5$ ) and risk of falls ( $6.26 \pm 2.8$ , vs  $4.9 \pm 2.27$ ,  $p > 0.5$ ). RA was associated with PP, OR 7.5 (1.8 – 30.7). **INTERACTIONS:** 60.38% had interactions (average 2.9 interactions per patient. B: 22.64%, C: 52.83%, D: 15.09%. X: 1. Interactions in PP: 7 (3 to 11) vs 3 (1 to 5) in no PP ( $p = 0.000$ ). STOPP criteria: 52.83% with at least 1 (1 – 4). The most common drugs with STOPP criteria: NSAIDs, benzodiazepines, ASA, hypnotics, pregabalin, corticosteroids, quetiapine, amitriptyline, beta blockers, tramadol, tapentadol, diuretics.

**Conclusion:** Polypharmacy is very common in the elderly population with rheumatic diseases and is related to a greater number of geriatric syndromes, drug interactions and rheumatoid arthritis. More than half of the patients had at least one STOPP criterion.

**Disclosure of Interest:** None Declared



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**Keywords:** INTERACTIONS, POLYPHARMACY, STOPP CRITERIA

## PANLAR 2024

### Rheumatoid arthritis

#### PANLAR2024-1367

### Effect Of Gdf-8 And Gdf-11 In Aggressive Phenotype Of Fibroblast Like-Synoviocytes Of Patients With Rheumatoid Arthritis

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#### Has this paper been previously presented at another conference?: Yes

**Background/Objectives:** Myokines, such as the growth differentiation factor (GDF) 8 and 11, have the function of regulating autocrine and paracrine activities on muscle tissue metabolism. In Rheumatoid Arthritis (RA), there is increased expression of GDF-8 in the synovial membrane patients, more specifically by fibroblast-like synoviocytes (FLS). On the other hand, the GDF-11 treatment appears to have a protective effect against the development of experimental arthritis. Therefore, the objective is to evaluate the GDF-8 and GDF-11 in synovial fluid (SF) levels in RA patients and to assess their *in vitro* effect on FLS.

**Methods:** Patients diagnosed with RA (n=11) of knee arthrocentesis were included in the study. The evaluation of SF levels of GDF-8 and GDF-11 was performed by ELISA. FLS were isolated from the SF of RA patients, and cell viability was determined in the presence and absence of GDF-8 and GDF-11 (10nM; 20nM and 50nM) for 24h and 48h by the MTT assay. Invasion capacity was performed the matrigel assay in the presence and absence of GDF-8 e GDF-11 (20nM and 50nM). The Kolmogorov–Smirnov method was used to test for normality, *in vitro* groups treatments were compared by one or two-way analysis of variance (ANOVA) using GraphPad Prism 6.0. (accepted at  $p \leq 0.05$ ).

**Results:** Levels of GDF-8 [SF: 31.30 pg/ml (31.30-181.80)] and GDF-11 [SF: 31.30 pg/ml (31.30- 88.13)] were observed in SF. Furthermore, treatment with different concentrations (10nM, 20nM and 50nM) of GDF-8 and GDF-11 did not affect FLS viability. Stimulation with a 20nM dose of myostatin and GDF-11 decreases FLS invasion by 16% (83.7 %  $\pm$  0.0 vs 100 %  $\pm$  0.0 control;  $p=0.036$ ) and 18% (81 %  $\pm$  0.0 vs 100%  $\pm$  0.0 control;  $p=0.024$ ), respectively. Also, stimulation with 50nM of GDF-8 (90.6%  $\pm$  0.0; control: 100  $\pm$  0.0%;  $p<0.01$ ) decreased invasiveness by 10%, and GDF-11 by 14% when compared to control (GDF-11: 86.0  $\pm$  0.0%; control: 100 $\pm$  0.0%;  $p<0.01$ ).

**Conclusion:** GDF-8 and GDF-11 were observed in SF and showed protective results, reducing the invasive capacity of FLS. Considering the demonstration of myokines in the joint cavity, and possible relevant action in FLS-RA, our positive results contribute to the knowledge about the participation of myokines in the pathogenesis of RA.

**Disclosure of Interest:** None Declared

**Keywords:** Fibroblasts like-synoviocytes, Myokines, Synovial fluid



## PANLAR 2024

### Rheumatoid arthritis

#### PANLAR2024-1369

### Muscle Ultrasound Could Provide Predictive Information In Rheumatoid Arthritis Patients: A 1-Year Prospective Cohort Study

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#### Has this paper been previously presented at another conference?: No

**Background/Objectives:** There are still few studies that verify the clinical and physical changes related to muscle thickness (MT) and pennation angle (PA) over time in rheumatoid (RA) arthritis patients. Our objective was to verify the associations between clinical and physical changes with MT and PA in RA patients.

**Methods:** This prospective cohort study included women and men with RA. Morphological parameters in the quadriceps muscle consisted of the MT and PA of rectus femoris (RF), vastus intermedius (VI) and vastus lateralis (VL). Disease activity was measured by the 28-joint Disease Activity Score (DAS28-CRP) and categorized into remission, low, moderate and high activity. Muscle strength was assessed by the handgrip test, physical performance by the timed-up-and-go (TUG) test, and physical function by the Health Assessment Questionnaire (HAQ). Changes at the end of follow-up were categorized as remained, improved and worsened according to the minimal difference clinically important (MDCI) described in the literature for each clinical variable. ANOVA followed by post hoc test or Kruskal-Wallis test were conducted when appropriate ( $p < 0.05$ ).

**Results:** At baseline, 155 patients (137 women/18 men) with a mean of age of  $58.7 \pm 9.5$  years old, disease duration of 11.0 (6.0-20.0) years and DAS28-CRP of  $3.0 \pm 1.3$  were included. Of the initial 155 patients, 106 patients completed the 1-year follow-up. Concerning of the 1-year progression of clinical variables, patients that improved grip strength ( $\geq 6.5$ kg) had greater MT of RF at baseline (mean difference 0.4 cm,  $p < 0.05$ ). Also, there was mean difference of  $1.45^\circ$  on PA of VL of patients who remained HAQ compared to patients who improved HAQ ( $p = 0.026$ ). There were no statistically significant differences between muscle morphology and changes on disease activity status and TUG test ( $p > 0.05$ ).

**Conclusion:** The muscle thickness of rectus femoris and pennation angle of vastus lateralis were related to changes on muscle strength and physical function in RA over 1-year. Also, morphological parameters were not related to disease status at baseline. Muscle ultrasound could provide predictive information related to changes in muscle strength and physical function in RA.

**Disclosure of Interest:** None Declared



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**Keywords:** Muscle mass, Muscle ultrasound, Rheumatoid arthritis

## PANLAR 2024

### Sjogren's and other systemic autoimmune diseases

#### PANLAR2024-1370

#### **Bioelectrical Impedance Analysis Has Been Shown To Be An Accurate And Consistent Tool To Body Composition Analysis In Patients With Systemic Sclerosis.**

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#### **Has this paper been previously presented at another conference?: No**

**Background/Objectives:** To compare body composition measured by electrical bioimpedance (BIA) versus dual X-ray absorptiometry (DXA) in sclerosis systemic (SSc) patients.

**Methods:** SSc patients according to ACR/EULAR 2013 criteria were consecutively included between 2022-2023.

Modified Rodnan's skin score (mRSS) and EUSTAR activity index were calculated by electronic medical record. The body composition (muscle mass by appendicular skeletal muscle mass (ASM) and appendicular skeletal muscle mass index (ASMI); fat mass (FM) and fat-free mass (FFM) was assessed by BIA (In Body 370s) and DXA (GE FamBeam 4500A). Low muscle mass (BIA or DXA) was defined according to the European Working Group on Sarcopenia in Older People 2 (ASM:  $\leq 15$ kg; and ASMI:  $\leq 5.5$ kg/m<sup>2</sup>) for women. Intraclass correlation coefficients (ICC), Bland-Altman plot and diagnostic accuracy (sensitivity, specificity, ROC curve) were performed. Good agreement was defined as ICC $>0.8$  and excellent ICC $>0.9$  (p $<0.05$ ).

**Results:** 100 SSc patients (91 women) were included. The mean age was 60.1 $\pm$ 11.5 years old, median disease duration was 11.5 (5.0-20.3) years and 23% showed diffuse-cutaneous. The median mRSS was 4.0 (2.0-9.0) and the EUSTAR index was 1.8 (1.0-3.3). The ASM by BIA showed good agreement [ICC=0.888 (95%CI: 0.762-0.940)] compared to DXA. Also, the FM and FFM showed excellent agreement [ICC=0.974 (95%CI: 0.962-0.983) and ICC=0.953 (95%CI: 0.931-0.968), respectively] compared to DXA. The area under the ASM curve showed AUC=0.752 (95%CI: 0.555-0.948, p=0.013) and ASMI showed AUC=0.806 (95%CI: 0.626- 0.986, p=0.003]. Alternatively, the estimated possible cut-off points are 13.5 kg for ASM and 5.8 kg/m<sup>2</sup> for ASMI, both of which showed a sensitivity of 87.5% and a specificity of 83.1%.

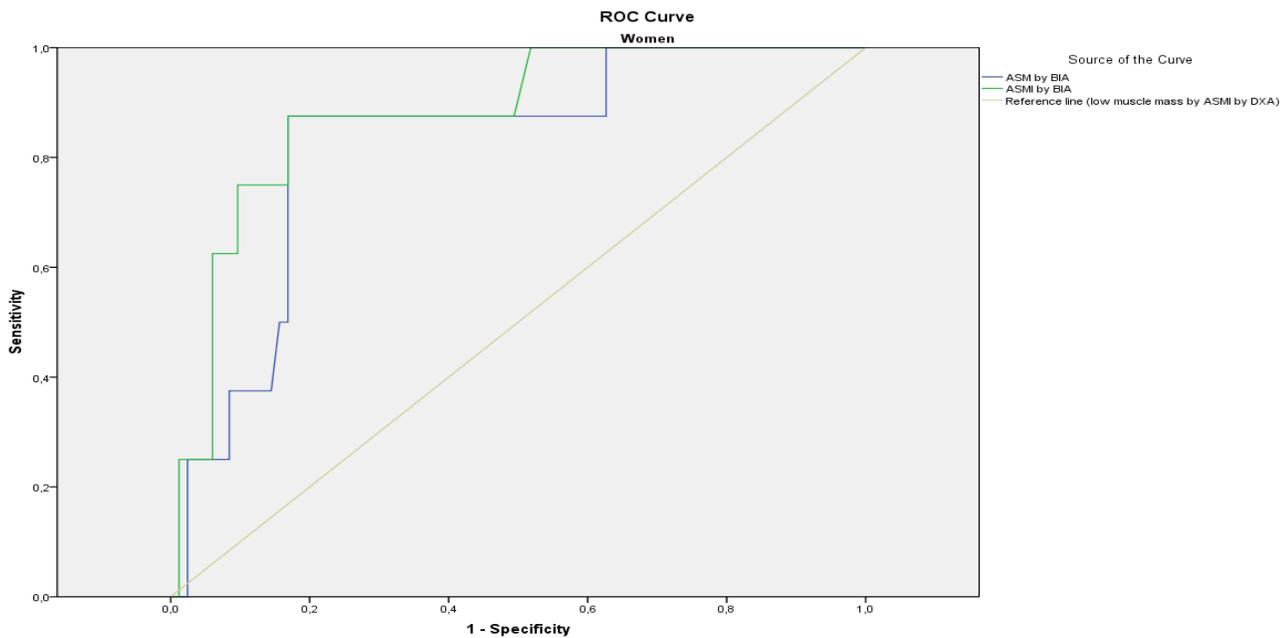
#### **Table 1:**

**Table 1. Comparison between DXA and BIA measurements**

	DXA	BIA	$\Delta$	ICC	95% CI	$p$
ASM	16.8±3.4	16.0±3.5	0.8±1.4	0.888	0.762-0.940	<0.001
ASMI	6.8±0.9	6.4±0.9	0.4±0.6	0.711	0.467-0.832	<0.001
FM	24.2±9.1	24.6±9.0	-0.4±2.0	0.974	0.962-0.983	<0.001
FFM	39.4±6.4	39.4±6.9	-0.0±2.0	0.953	0.931-0.968	<0.001

$\Delta$ : difference between DXA and BIA measurements

**Image 1:**



**Conclusion:** BIA is a useful tool due to its good and excellent agreement in assessing body composition compared to DXA. In addition, our results suggest cut-off points (13.5 kg for ASM and 5.8 kg/m<sup>2</sup> for ASMI) in SSc patients with improved sensitivity and specificity for diagnosis low muscle mass.

**Disclosure of Interest:** None Declared



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**Keywords:** bioimpedance, massa muscular, sclerosis systemic

## PANLAR 2024

### Pediatric Rheumatology

#### PANLAR2024-1376

#### Prevalence Of Brain-Gut Axis Disorders In Children With Rheumatic Disease In A Tertiary Hospital In Cali, Colombia

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#### Has this paper been previously presented at another conference?: No

**Background/Objectives:** The prevalence of disorders of Gut-Brain Interaction (DGBI) in children is 21%. No studies have been conducted to determine the prevalence of DGBIs in the pediatric population with rheumatic diseases. Thus, the aim of this study was to describe the prevalence of DGBIs in children between 4 and 18 years of age with rheumatic diseases in a tertiary level hospital in Cali, Colombia. This is the first study carried out in this type of population, making use of the Rome IV Criteria, and evaluating their quality of life with the KIDSCREEN tool.

**Methods:** This is a prospective descriptive observational study. Included patients of both sexes, aged between 4 and 18 years, who attended the pediatric rheumatology outpatient clinic of a tertiary level hospital in Cali, Colombia between May and November 2023 and had a diagnosis of a rheumatic disease. Children were excluded if they had a previous diagnosis of a gastrointestinal disease other than DGBIs, had undergone gastrointestinal surgical procedures or had a diagnosis of inflammatory bowel disease. We currently have data from 58 patients to whom the Rome IV questionnaires were applied.

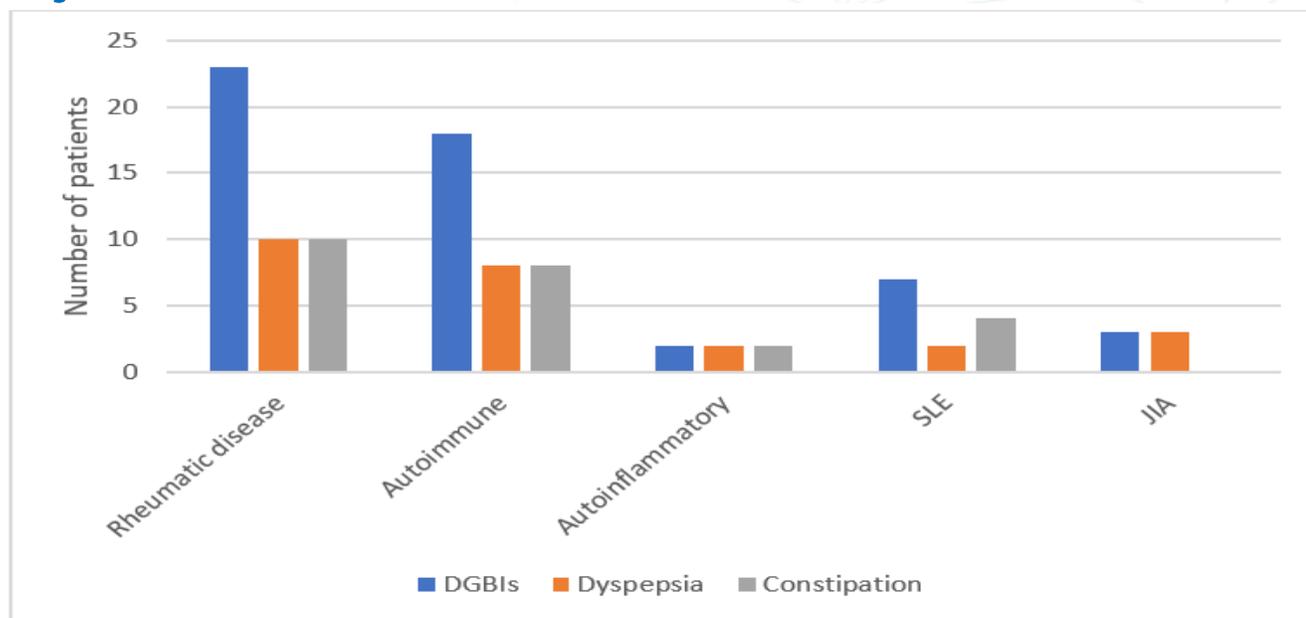
**Results:** From 58 children evaluated (mean age  $13.4 \pm 3.7$  years) 39.7% had at least one DGBIs, with an overlap of DGBI in 12.1%, most commonly DGBIs were functional dyspepsia and constipation ( $n=10/58$ , 17.2%). Autoimmune diseases were the mainly associated with DGBIs representing 78.1% of the children with DGBIs in this study. SLE and juvenile idiopathic arthritis (JIA) were identified as the primary related diseases. Functional dyspepsia was the strongest association with JIA (25% of children with dyspepsia had JIA), while constipation was most closely linked with SLE (20% of children with constipation had SLE) (Table 1) (Image 1).

**Table 1:**

Characteristics		n=58	%
Age		13.4+/-3.7 5-18 years	
Age group	School age child	18	31
	Adolescent	40	69
Sex	Female	41	70.7
	Male	17	29.3

Category	Autoimmune	49	84.4
	Autoinflammatory	6	10.3
	Other	4	6.8

**Image 1:**



**Image 2. Association of DGBIs with rheumatic diseases**

**Conclusion:** The prevalence of DGBIs is almost twice as high in children with rheumatic diseases as in those without these diseases. Furthermore, we found that functional dyspepsia has a prevalence equal to that of constipation in this population, which is the DGBI mainly found in the general population, leading us to conclude that functional dyspepsia is an important DGBI in this context

**Disclosure of Interest:** None Declared

**Keywords:** Brain-Gut Axis, Gastrointestinal Diseases, Rheumatic Diseases

## PANLAR 2024

### Rheumatoid arthritis

#### PANLAR2024-1377

#### Neuroinflammation In An Experimental Model Of Arthritis: A Pilot Study

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#### Has this paper been previously presented at another conference?: Yes

**Background/Objectives:** Pain is one of the main symptoms in Rheumatoid Arthritis (RA), and often does not correspond directly to the inflammatory activity of the joints. There is no consensus on the relationship between the systemic inflammatory process and changes in the central nervous system that may influence pain patterns in these patients. Our objective was to evaluate the relationship between neuroinflammatory parameters in the brain and nociceptive parameters in the CIA model.

**Methods:** CIA was induced in male DBA1/J mice (32) between 8-12 weeks of age, randomized into 4 groups: control group(CO25) and CIA25 days and control group(CO50) and CIA50 days. Clinical score and paw edema were evaluated. Nociception was assessed using Von Frey. After euthanasia, brain were subjected to the immunofluorescence technique with anti-IgM and anti-IgG antibodies, and immunohistochemistry with anti-IL6, and to analyzing the neurodegeneration by Fluoro-Jade C. Data were analyzed by Two-way ANOVA, Kruskal-Wallis and Pearson correlation;  $p < 0.05$  was considered significant.

**Results:** The CIA group had a higher clinical score, paw edema, histological score and nociception compared to the CO group ( $p < 0.0001$ ;  $p = 0.001$ ;  $p = 0.001$ , respectively). High IgM deposits were observed in the CIA25 group compared to the CO25 group ( $p = 0.01$ ). Regarding IgG, no differences were observed between the CIA and CO groups at the two moments evaluated. IL6 expression was increased in the CIA50 group when compared to CO50 ( $p = 0.008$ ). An association was identified between the clinical score and the expression of IL6 in the brain only in the CIA25 group ( $p = 0.08$ ). IL6 expression was also associated with pain threshold at disease time 25 ( $p = 0.002$ ) and 50 ( $p = 0.022$ ). The quantification of degenerated neurons did not show a statistically significant difference, but there is a tendency for an increase in the number of degenerated neurons in mice in the CIA50 group when compared to the CO50 group.

**Conclusion:** Clinical, paw edema, histological and nociceptive scores characterized the presence of arthritis in the model. In the acute phase of the disease, high IgM deposits were identified in the brain, while in the established phase only IL6 expression was increased. An association was observed between IL6 and the clinical score in the initial period of the



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disease, as well as with the pain threshold in both periods of the disease (25 and 50 days). These results demonstrate the presence of neuroinflammation in this arthritic model.

**Disclosure of Interest:** None Declared

**Keywords:** Collagen-induced arthritis, Neuroinflammation, Rheumatoid arthritis model

## PANLAR 2024

### Sjogren's and other systemic autoimmune diseases

#### PANLAR2024-1384

#### Damage In A Cohort Of Patients With Igg4-Related Disease

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#### Has this paper been previously presented at another conference?: Yes

**Background/Objectives:** IgG4-related disease (IgG4-RD) is a heterogeneous and multi-organ condition whose etiology has not yet been fully clarified and which can cause organ failure. Despite its complexity, there is still no validated score to comprehensively evaluate the long-term damage, both from the disease itself and from the treatments used in these patients. Our objective was to evaluate organ damage in a cohort of patients with IGG4.

**Methods:** Patients  $\geq 18$  years who met ACR/EULAR 2019 classification criteria for IgG4-RD who were followed up in our hospital between the years 2000-2023 were included. The different phenotypes of the disease were identified, cumulative damage was evaluated at the end of follow-up due to the disease, defined as permanent organic damage, and the cumulative dose of corticosteroids and the glucocorticoid toxicity index were calculated.

**Results:** 43 patients were included, 30 male (69.8%), with a median age at diagnosis of 61.5 years (IQR 49.4-70.5) and a median follow-up of 10 months (IQR 5-42). The majority had multiorgan involvement 30 (69.8%) and the distribution according to phenotypes was: Pancreato-hepato-biliary disease n=17; Retroperitoneal fibrosis and/or aortitis n= 4; Disease limited to head and neck n=9; Classic Mikulicz syndrome with systemic involvement n=8 and unclassifiable n=5. (Table 1)

Of the total, 43.9% had a relapse during follow-up and 3 patients died. 86.1% received corticosteroids as initial treatment and 27.9% in combination with immunosuppressants. The cumulative dose of meprednisone at the end of follow-up was 4.4 grams (IQR 2.8-6.9). 48.8% presented severe adverse effects due to corticosteroids, the most frequent being a marked decrease in densitometry (14.6%), diabetes due to corticosteroids (16.3%) and severe infections (11.6%). 75% presented irreversible organic damage associated with the disease, the most common being endocrine pancreatic insufficiency (n=9), exocrine (n=8) and bile duct injury (n=13) (Table 2).

#### Image 1:

**Table 1: Characteristics of 43 adults with IgG4-related disease**

Variables	Cohort (n=43)
Male Sex, n (%)	30 (69.8%)
Age at disease onset, years, median (IQR)	60.0 (47.8-68.6)
Age at diagnosis, years, median (IQR)	61.5 (49.4-70.5)
Follow-up time, months, median (IQR)	10 (5-42)
Allergy history n (%)	11 (25.6%)
ACR score at diagnosis, median (IQR)	29 (25-39)
Single-organ, n (%)	13(30.2%)
Multi-organ (≥2 organs), n (%)	30(69.8%)
<b>IGG4 phenotype</b>	
-Pancreato-hepato-biliary, n (%)	17 (39.5%)
-Retroperitoneal-Aortic, n (%)	4(9.3%)
-Head and neck, n (%)	9(20.9%)
-Mikulicz-Systemic, n (%)	8(18.6%)
-Not Classifiable (%)	5(11.6%)
<b>Laboratory</b>	
Serum IgG4, elevated at diagnosis, n/n (%)	19/39 (48.7%)
Serum IgG, elevated at diagnosis, n/n (%)	16/41 (39.0%)
Serum IgE, elevated at diagnosis, n/n (%)	18/26 (69.2%)
Eosinophilia, n (%)	9 (20.9%)
Erythrocyte sedimentation rate, mm, median (IQR)	37 (17-69)
C-Reactive Protein, mg/dl, median (IQR)	3 (0.5-18.6)
Hypocomplementemia, n/n (%)	11/33 (33.3%)
FAN positive, >1/160, n/n (%)	13/42 (30.9%)
Positive Rheumatoid Factor, n/n (%)	6/31 (19.4%)
<b>Treatment</b>	
Corticosteroids, n (%)	37(86.1%)
Corticosteroids plus immunosuppression, n (%)	12 (27.9%)
Meprednisone starting dose, milligrams, median (IQR)	40 (20-40)
Meprednisone cumulative dose, grams, median (IQR)	4.4 (2.8-6.9)
Number of relapses, n/n (%)	18/41(43.9%)
Any severe corticosteroid adverse event (GTI)	21 (48.8%)
Organic damage, n/n (%)	31/41 (75.0%)
Death	3 (6.9%)

**Image 2:**

**Table 2: Damage parameters according to phenotype**

Damage	Phenotypes				
	Pancreato-hepato-biliary (n=17)	Retroperitoneal-Aortic (n=4)	Head and neck (n=9)	Mickulicz Systemic (n=8)	Not classifiable (n=5)
Endocrine Pancreatic Insufficiency	7	0	0	2	0
Exocrine Pancreatic Insufficiency	6	0	0	2	0
Pancreatic Resection	5	0	0	0	0
Cirrhosis	1	0	0	1	0
Bile duct injury	9	0	1	3	0
IRC	1	0	0	2	1
Hydronephrosis	1	2	0	0	0
Xerostomia	3	0	2	1	0
Xerophthalmia	1	0	5	1	0
Ophthalmic gland resection	0	0	4	0	0
Salivary gland resection	0	0	1	2	0
Interstitialopathy	0	0	0	1	1
neurological damage	0	0	0	0	1
Panhypopituitarism	0	0	0	3	1
Total patients with organic damage	13	2	8	5	3

**Conclusion:** In this cohort of patients with IgG4, 75% presented irreversible organ damage and 48.8% presented severe damage due to corticosteroids, with a median cumulative dose of meprednisone of 4.4 grams in 10 months of follow-up.

**Disclosure of Interest:** None Declared

**Keywords:** Damage, Glucocorticoid Toxicity Index, IgG4-related disease (IgG4-RD)



## PANLAR 2024

### Miscellaneous

#### PANLAR2024-1414

#### Identification Of Vexas Syndrome In Mexican Patients With Inflammatory And Hematologic Manifestations.

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#### Has this paper been previously presented at another conference?: Yes

**Background/Objectives:** There is limited information on VEXAS syndrome in the Latin-American population. We aimed to identify *UBA1* mutations causing VEXAS syndrome in Mexican patients presenting with inflammatory and hematologic manifestations.

**Methods:** We included patients who had (i) one or more inflammatory manifestations associated with VEXAS syndrome (e.g. chondritis, neutrophilic dermatoses, vasculitis, pneumonitis), and (ii) one or more chronic cytopenias, or isolated macrocytosis. Genomic DNA was extracted from peripheral blood or available biopsies. To identify pathogenic *UBA1* mutations, Sanger sequencing of exons 3, 14, and 16 was performed. To identify variables associated with a positive result, we compared *UBA1*-positive and *UBA1*-negative patients.

**Results:** A total of 29 patients were tested, of whom 11 had a mutation in *UBA1* (positive detection rate: 37.9%). Eight were male (72.7%). The mean age at symptom onset was 59±17.2 years. The youngest patient was 23 y/o. Nine (81.8%) had the p.Met41Thr, and one each the p.Met41Val and p.Ser56Phe mutations. The clinical diagnoses (not mutually exclusive) were myelodysplastic syndrome in 6 (54.5%), relapsing polychondritis in 4 (36.5%), Sweet syndrome in 2 (18.2%), and one each of polyarteritis nodosa, type I cryoglobulinemia, pyoderma gangrenosum, thyroid orbitopathy, undifferentiated autoinflammatory syndrome, multiple myeloma, and chronic myeloid leukemia. Ten patients (90.9%) had hematological manifestations, with macrocytic anemia being the most common in 8 cases (72.7%). Most had macrocytosis (90.9%). Out of the 7 patients with a bone marrow aspirate, 4 (57.1%) had vacuoles. Glucocorticoids and immunosuppressors were prescribed to 7 patients (58.3%), while chemotherapeutic regimens in 2 (18.2%). With a median follow-up of 44 months (IQR 24-66), three patients had died. The presence of macrocytosis (OR: 12.5, CI: 1.3-119.3) and macrocytic anemia (OR: 6.9, CI: 1.2-37.2) were associated with the presence of a pathogenic *UBA1* mutation. Conversely, having a clinical diagnosis other than the most reported in VEXAS syndrome exhibited a negative association with a positive *UBA1* mutation (OR: 0.064, CI: 0.007-0.612).

**Conclusion:** Patients with clinical diagnoses commonly associated with VEXAS syndrome, along with the presence of macrocytosis or macrocytic anemia, have an increased likelihood of harboring a pathogenic *UBA1* mutation. Noteworthy, our cohort included a significant proportion of female patients and the youngest ever reported case of VEXAS syndrome.



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**Disclosure of Interest:** None Declared

**Keywords:** polyarteritis nodosa, RELAPSING POLYCHONDritis, VEXAS SYNDROME

## PANLAR 2024

### Sjogren's and other systemic autoimmune diseases

#### PANLAR2024-1432

#### Central Nervous System Vasculitis As The Debut Of Igg4-Related Disease: Case Report

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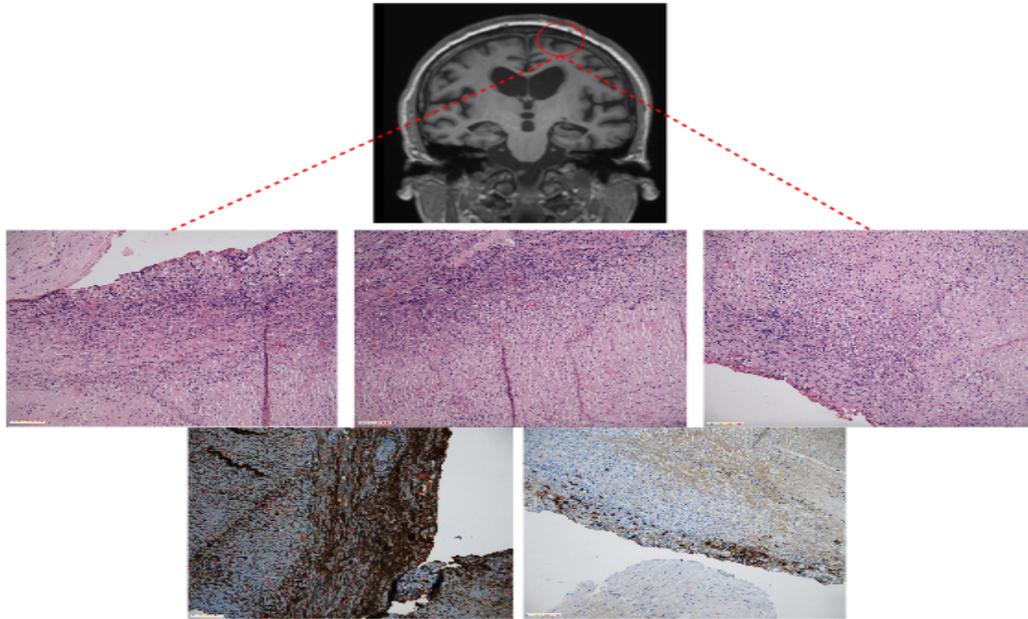
#### Has this paper been previously presented at another conference?: No

**Background/Objectives:** Immunoglobulin G4-related disease (IgG4-RD) represents a recently acknowledged fibroinflammatory condition affecting multiple organs and tissues either focally or diffusely. Its diagnosis mandates a keen clinical suspicion, histological validation, and correlation between radiological and serological findings. In this report, we present a case study of an individual manifesting central nervous system vasculitis as an initial and uncommon presentation of IgG4-RD in Bogotá, Colombia.

**Methods:** The case involves a 55-year-old male who sought consultation at the emergency department, presenting progressive clinical symptoms over an 8-day period. Symptoms included occipital headache exacerbated by Valsalva maneuvers, accompanied by nausea, disorientation, weakness in the upper and lower limbs, and gait disturbances. This patient's medical history indicated primary central nervous system vasculitis, confirmed by previous cerebral pan-angiography revealing a beaded pattern and venous sinus thrombosis. Subsequent contrast-enhanced brain MRI demonstrated pachymeningitis (Image 1). An angioresonance of the abdomen and pelvis revealed concentric thickening of the infrarenal abdominal aorta and primitive iliac arteries (up to 6 mm), displaying diffusion restriction and poor enhancement post-intravenous contrast, indicative of acute arteritis. Additionally, moderate right hydronephrosis with underlying fibrous tissue and a retroperitoneal space anomaly at the distal ureter, junction of the iliac vessels, were observed. Associated pathologies were ruled out.

**Results:** A meningeal lesion biopsy showed phlebitis obliterans, abundant plasmacyte infiltrate, notable IgG cellular infiltrate (with 40% IgG4), and 10 cells observed in 2 fields of substantial amplitude (Image 1). This histological profile confirmed the diagnosis of IgG4-RD. Considering the severity of the condition, treatment was initiated with methylprednisolone pulses (500 mg/day for three days), followed by prednisolone (0.5 mg/kg), and an initial dose of rituximab (1 gram). The patient exhibited neurological improvement and was discharged.

#### Image 1:



**Conclusion:** IgG4-related disease poses a significant diagnostic challenge and remains an underrecognized clinical entity. Its broad clinical spectrum necessitates the consideration and exclusion of various pathologies, rendering IgG4-RD a differential diagnosis that demands comprehensive clinical, paraclinical, and histological evaluations for an accurate determination.

**Disclosure of Interest:** None Declared

**Keywords:** IgG4-related disease (IgG4-RD), Pachymeningitis, Retroperitoneal fibrosis

## PANLAR 2024

### Pediatric Rheumatology

#### PANLAR2024-1439

### A Real Life Study: A One Year Clinimetric Follow-Up From An Inception Cohort Of Juvenile Idiopathic Arthritis (Jia) Patients From Three Mexican Pediatric Rheumatologist Centers.

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#### Has this paper been previously presented at another conference?: No

**Background/Objectives:** To obtain principal outcome measures for disease activity, functional capacity, disease damage and therapeutic response in an inception cohort of JIA patients from three Mexican Pediatric Rheumatologist Centers.

**Methods:** Prevalent cases were scheduled in 4 visits (Basal-12,26 and 54 weeks). Demographics, disease activity (JADAS-27), functional capacity (CHAQ disability index), disease damage (JADI) and therapeutic response (ACR-Ped 30,50,70,90) were prospectively evaluated. A logistic regression analysis to define explanatory variables at baseline for principal outcome measures at 52-week visit was performed.

**Results:** A total of 137 patients with JIA criteria (ILAR) completed programmed visits. A female: male ratio: 1.8; median age of onset: 6 years (IR: 2-12); median disease duration: 4 years (IR: 1-8); median time for diagnosis and treatment: 2 years (IR: 1-4); ILAR subtype: Systemic: 12 (9.4%); Polyarticular RF (+): 30 (23.6%); Polyarticular RF (-): 27 (21.2%); Persistent oligoarticular: 18 (14.1%); Extended oligoarticular; 5 (3.9%); Psoriatic arthritis: 3 (2.3 %); Entesitis related arthritis: 36 (28.3%) and other arthritis: 6 (4.7%). A statistically significant differences were found between visits 1 and 54 for physician's global assessment of disease activity, active joints, joints with limitation on motion, joints with swelling, joints with pain; PCR, CHAQ, parent's assessment of child's well-being, parent's assessment of child's pain, ACR-Ped-30, 50, 70, 90 and JADAS 27 ( $p < 0.001$ ). No differences were found for the JADI ( $p = 0.43$ ). The baseline explanatory variables in the best-fitted logistic regression model for JADAS-27 ( $> 10$ ) at visit 54 were: median time for diagnosis and treatment:  $> 1$  year; physician's global assessment of disease activity:  $> 4$ ;  $> 6$  active joints;  $> 6$  joints with pain and PCR ( $> 7$  mg/dl) ( $p < 0.0001$ ); and for the CHAQ ( $> 0.8$ ) at visit 54 were:  $> 6$  active joints and  $> 6$  joints with limitation on motion ( $p < 0.002$ ). No explanatory variables were found for the JADI A ( $> 1$ ) or JADI-E ( $> 0.5$ ).

**Conclusion:** A significantly improvement in disease activity, functional capacity and therapeutic response was observed. Different explanatory variables at baseline were related with persistent disease activity and functional disability. In the real life setting, the clinimetric measurement of outcome measures, grants physicians with a more objective evaluation for the clinical-therapeutic decision making.

**Disclosure of Interest:** None Declared

**Keywords:** Juvenile Idiopathic Arthritis, outcome measures



## PANLAR 2024

### Infections (including COVID-19)

#### PANLAR2024-1447

### A Follow-Up Study In Children With Multi-System Inflammatory Syndrome Temporally Related To Sars-Cov-2 Infection (Mis-C/Ts), From A Third Level Hospital In Mexico.

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#### Has this paper been previously presented at another conference?: No

**Background/Objectives:** To analyze clinical and laboratory features in children with MIS-C/TS, according with WHO criteria, from a third level hospital in Mexico.

**Methods:** A follow-up study of all patients who met WHO criteria of MIS-C/TS, evaluated at hospital admission and at one-year follow-up visit after hospital discharge. Two primary outcome variables were studied: the necessity of a pediatric intensive care unit (PICU) at hospital admission and the presence of autoimmunity, defined as the presence of 1:80 titles of antinuclear antibodies (ANA) at admission and in one-year follow-up visit. Association between single independent variables and the binary selected outcomes was assessed in a univariate analysis computing odds ratio (OR) and 95% confidence intervals (95% CI).

**Results:** 40 previously healthy children completed WHO criteria of MIS-C/TS, with a median age of 6.8 years; female: male ratio: 1.2; median duration of fever: 6.3 days; Kawasaki-like clinical manifestations: 75% of patients; completed Kawasaki criteria: 22%; Hypotension or shock: 57%; myocardial dysfunction: 47%; pericarditis: 45%; valvulitis: 15%; coronary abnormalities: 17.5%; coagulopathy (by PT, PTT or elevated d-Dimers): 30%; gastrointestinal manifestations: 27.5%; elevated markers of inflammation (ESR, C-reactive protein): 92.5%; evidence of SARS-CoV-2 infection by likely contact: 90%; antigen test (+): 53%; RT-PCR (+): 59% and Ig-G SARS-CoV-2 (+): 68%. ANA (+) was observed in 40% of patients at hospital admission and in 25% at one-year follow-up visit. Seventy percent of patients were admitted to PICU. Hypotension or shock (OR: 107; 95%CI: 5.5-2093; p=0.0021); myocardial dysfunction (OR: 19.8; 95%CI: 2.2-177; p=0.0075); coagulopathy (OR: 18.9; 95%CI: 1-351.4; p=0.0484) and elevated markers of inflammation: (OR: 219; 95%CI: 12.2-3923.8; p=0.0003) were statistically significant associated with PICU admission. No clinical associations were found with ANA (+) at hospital admission and at one-year follow-up visit.

**Conclusion:** In this follow-up study, MIS-C/TS presents in previously healthy children as a delayed hyper-inflammatory condition and overlapping autoimmunity occurring after a SARS-CoV-2 infection. Hypotension or shock, myocardial dysfunction, coagulopathy and laboratory evidence of systemic inflammation were the principal outcome variables. ANA (+) was observed in up to 40% of patients at hospital admission and in 25% at one-year follow-up visit.

**Disclosure of Interest:** None Declared



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**Keywords:** multi-system inflammatory syndrome, Pediatrics

## PANLAR 2024

### Vasculitis and related diseases

#### PANLAR2024-1459

#### Patterns Of Ischemic Myositis On Magnetic Resonance Imaging In Patients With Polyarteritis Nodosa

Andres Felipe Ramirez Peralta\*<sup>1</sup>, Alex Jhonier Imbachi Salamanca<sup>1</sup>, Andres Felipe Vargas<sup>2</sup>, Julian Felipe Sanchez Bautista<sup>1</sup>, Luis Alonso Gonzalez Naranjo<sup>1</sup>, Gloria Vasquez<sup>1</sup>, Adriana Lucia Vanegas<sup>1</sup>, Carlos Horacio Muñoz Vahos<sup>1</sup>  
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#### Has this paper been previously presented at another conference?: Yes

**Background/Objectives:** Background: Polyarteritis nodosa (PAN) affects skeletal muscle in almost half of the patients with weakness and/or myalgia in the calves being a characteristic manifestation. Therefore, magnetic resonance imaging of the legs (MRI-LE) findings have been proposed to support the diagnosis.

**Objective:** To describe the findings of MRI-LE with emphasis on muscle, bone and fascia involvement in patients with polyarteritis nodosa (PAN).

**Methods:** Methods. Clinical and radiological description of patients with PAN and MRI-LE (January 2011 to December 2022).

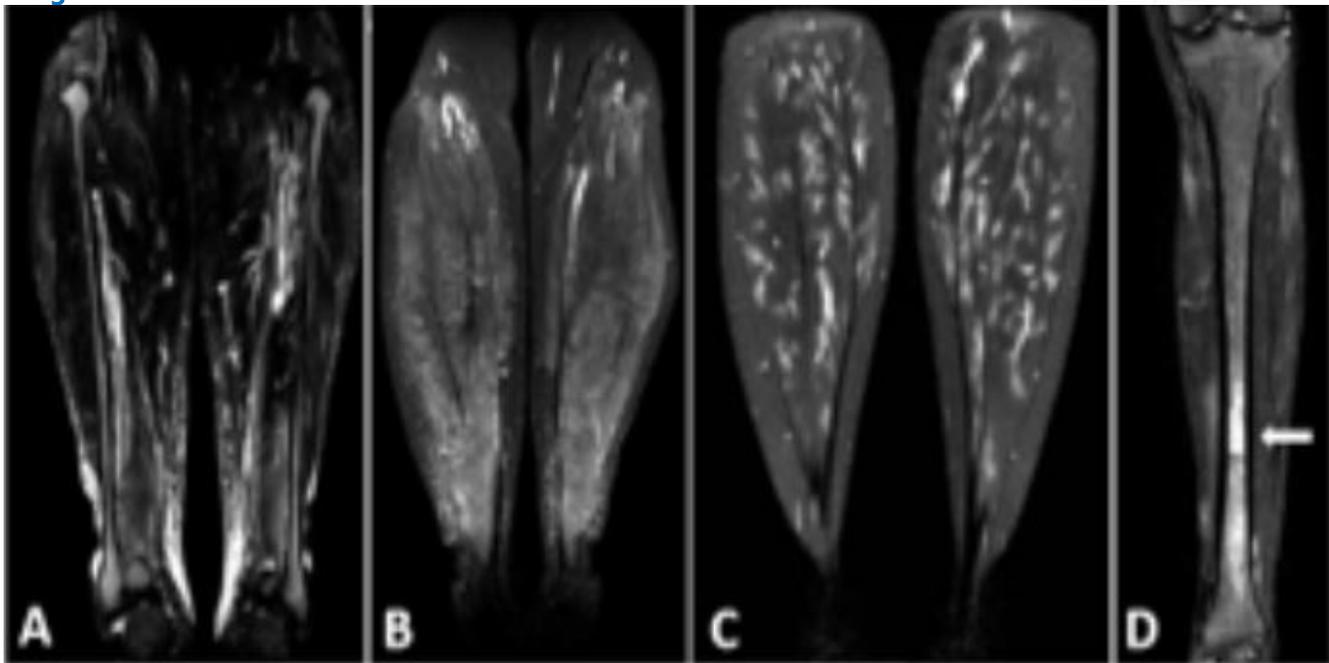
**Results:** Results. The clinical characteristics of 52 patients with PAN are described in the table. The main symptoms were muscle weakness in 78.8% (41/52) and myalgias in 76.6% (36/51), especially in the calves in 69.23% (36/51). 78.8% (41/52) were classified as systemic PAN. MRI-LE was performed in 42.3% (22/51). Muscle edema was present in 89.4%, located in 26.3% in the gastrocnemius, 26.3% in the anterior and posterior compartments, and 10.5% in the femoral quadriceps. Involvement was bilateral in 94.7%, 60% (12/20) with a patchy pattern (image A), 25% (5/20) with a diffuse pattern (image B), and 5% (1/20) with a nodular spongy pattern (image C). Fascia was affected in 15.7% (3/19). Bone marrow edema was found in 50% (9/18), with the tibia being the most affected bone at 55.5% (5/9) (image D).

**Table 1:**

Clinical characteristics	Percentage
Age (SD)	37,5 years (20,4%)
Sex F/M	28/24 (53,8%/46,2%)
Fever	30 (57,6%)
Weight loss (>4kg)	28 (53,85%)
Arthralgias	24 (46,1%)

Hypertension	11 (23,4%)
Purpura	16 (30,77%)
Livedo reticularis	14 (26,9%)
Ulcers	16 (30,77%)
Peripheral neuropathy	21 (44,68%)
Renal involvement	4 (8,51%)
Orchialgia	7 (13,46%)
Associated with hepatitis B	2 (3,85%)

**Image 1:**



**Conclusion:** Conclusions: In our cohort, we identified muscle lesions in 90% of patients, mainly in the gastrocnemius, with patchy pattern being more frequent. Half of the patients had bone involvement. Therefore, MRI-LE is useful to identify PAN myositis.

**Reference 1:** 1. Kang Y, et al. Muscle Involvement in Polyarteritis Nodosa: Report of Eight Cases With Characteristic Contrast Enhancement Pattern on MRI. AJR Am J Roentgenol 2016; 206: 378-84



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**Disclosure of Interest:** None Declared

**Keywords:** myositis, polyarteritis nodosa, resonance

## PANLAR 2024

### Rheumatology education

#### PANLAR2024-1475

#### Depression Rates In Rheumatologist From Latin America

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#### Has this paper been previously presented at another conference?: No

**Background/Objectives:** Depression is one of the biggest challenges that medicine is facing, especially after the COVID pandemic. Lehman showed that 1 in 4 doctors have suffered from depression at some point in their career(1).

**Methods:** Cross-sectional study that included rheumatologists from Latin America associated with the Pan-American League of Associations for Rheumatology (PANLAR). The information was collected through an online survey created by rheumatologists in Ecuador and approved by the PANLAR scientific committee; This was disseminated by the rheumatology associations of each country by email during August to November 2020. Depression was measured with the Patient Health Questionnaire (PHQ-9). To measure burnout we used the Maslach Burnout Inventory (MBI) questionnaire; Burnout was defined if the cut-off point was reached in any of the 3 dimensions:  $\geq 27$  for emotional exhaustion,  $\geq 10$  for depersonalization or  $\leq 33$  for personal achievement. 7 point Likert Scales were used to measure happiness and job satisfaction.

**Results:** 297 rheumatologists were included, 38% men and 62% women. 65% were married and 20.9% single. 15 countries of Latin America were included, among them: 28.3% Argentina, 26.3% Brazil, 12.8% Mexico, 9.1% Colombia, 7.7% Ecuador and 7.1% Chile. Depression was found in 48.8%: mild 33%, moderate 8.8%, moderate severe 4%, severe 3%. The mean PHQ-9 score was  $5.5 \pm 5.3$ , while the mean happiness scale was  $5.5 \pm 1.1$ . The reported symptoms were: anhedonia 46.1%, feeling depressed 40.7%, sleep alterations 57.2%, fatigue 75.1%, appetite changes 46.1%, feelings of failure 37%, decreased concentration 50.2%, psychomotor changes 27.9%, thoughts of hurting yourself 9.8%. Also 8.2% have had suicidal thoughts at some point and 8.4% reported low self-esteem. Only 4% had clinically diagnosed depression, 7.7% anxiety and 14.5% were taking SSRI/SNRIs.

**Conclusion:** In conclusion, depression was frequent among the doctors who participated in this survey, many times symptoms such as sleep disturbances, decreased concentration and fatigue, can be easily confused and attributed to the implicit stress of the profession, which is why its diagnosis is a challenge. This study is a call for action and consciousness to address the modifiable factors that contribute to this problem and promote healthier work environments where a person can ask for help without being stigmatized.

**Reference 1:** 1. Christine Leham. More Physicians Are Experiencing Burnout and Depression. Medscape. Feb, 2023. [Internet]. <https://www.medscape.com/viewarticle/987748?form=fpf>

**Disclosure of Interest:** None Declared



**Keywords:** Depression

## PANLAR 2024

### Spondyloarthritis

#### PANLAR2024-1478

#### Gut Microbiome Diversity And Depression In Patients With Spondyloarthritis

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**Has this paper been previously presented at another conference?: No**

#### **Background/Objectives:** Introduction:

The human microbiome is the set of microorganisms that symbiotically inhabit the gastrointestinal ecosystem. It has been proposed that dysbiosis of the microbiome alters mechanisms related to the pathophysiology of spondyloarthritis, as well as the presence of disease activity, gastrointestinal symptoms, and neuropsychiatric symptoms through a gut-brain axis.

#### **Objective:**

To determine the diversity of the gut microbiome in patients with spondyloarthritis in relation to depression.

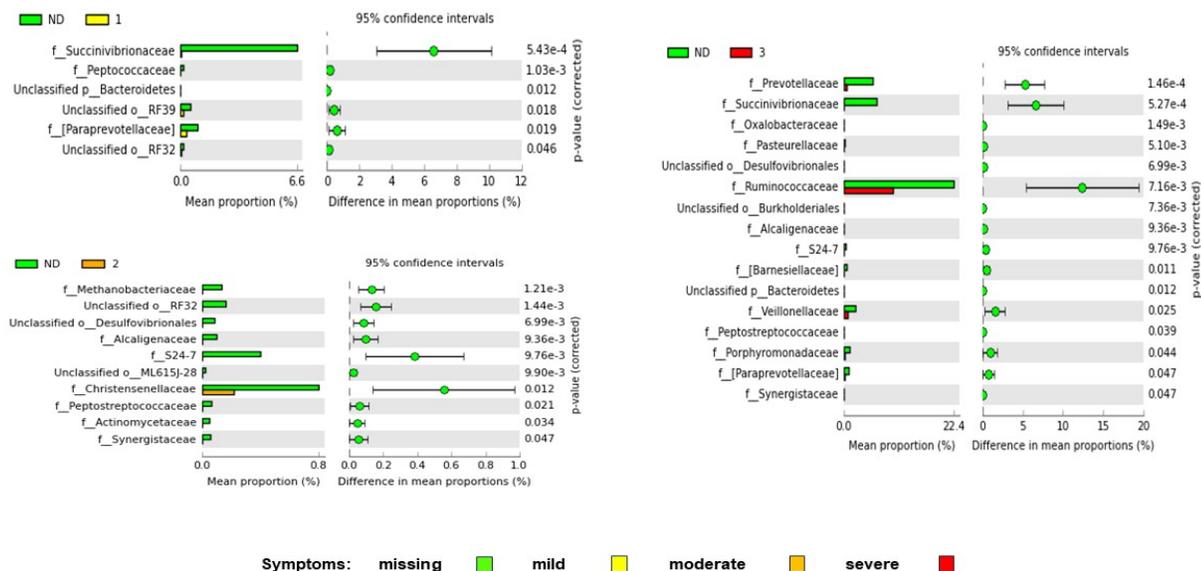
**Methods:** Fifty-five patients with spondyloarthritis, from whom a stool sample was collected for total DNA extraction, were included. Amplicon libraries of the 16S rRNA gene of the V3-V4 variable regions were made and sequenced on MiSeq (Illumina) 300 PE. ASVs clustering and taxonomic assignment were performed with DADA2 and Greengenes, respectively. Alpha and beta diversity analysis were performed in QIIME2. All patients were assessed for depression with the PHQ9 scale, and associations between diversity and depression severity were examined

#### **Results: Results:**

Significant differences were found in the taxonomic distribution of the microbiota of patients according to the different degrees of depression compared to those without depressive symptoms. According to difference between mean relative abundance (DBM) of SpA patients without depressive symptoms *Succinivibrionaceae* ( $p=0.0005$ ), *Christensenellaceae* ( $p=0.012$ ) and *Ruminococcaceae* ( $p=0.007$ ) were the families with the highest DBM in comparison of patients with mild, moderate, and severe depressive symptoms. (Image 1). No significant differences were found in Alpha diversity, while a significant difference was found in Beta diversity (Bray-Curtis  $p=0.014$ )

Image 1:

Figure 1: Taxonomy and Depression



**Conclusion: Conclusions:**

The gut microbiome in patients with spondyloarthritis presents significant differences in taxonomic distribution and Beta diversity according to the presence of depressive symptoms. Ruminococcaceae was one of the most frequent in patients with depression, suggesting a possible association mediated by dysbiosis of the microbiome that alters the gut-brain axis.

**Reference 1:** Hu X, Li Y, Wu J, et al. Changes of gut microbiota reflect the severity of major depressive disorder: a cross sectional study. *Transl Psychiatry*. 2023;13(1):137. Published 2023 Apr 28. doi:10.1038/s41398-023-02436-z

**Reference 2:** Liu RT, Rowan-Nash AD, Sheehan AE, et al. Reductions in anti-inflammatory gut bacteria are associated with depression in a sample of young adults. *Brain Behav Immun*. 2020;88:308-324. doi:10.1016/j.bbi.2020.03.026

**Disclosure of Interest:** None Declared

**Keywords:** Depression, microbiome, Spondyloarthritis

## PANLAR 2024

### Rheumatoid arthritis

#### PANLAR2024-1479

#### Antifibrotics In Rheumatoid Arthritis-Interstitial Lung Disease. Multicenter Study Of 73 Patients

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#### Has this paper been previously presented at another conference?: Yes

**Background/Objectives:** ILD is a critical complication of RA. ABA and RTX are preferred DMARDs for RA-ILD. However, progression of ILD despite its use is common. INBUILD trial showed slower decline in FVC in patients with progressive fibrosing autoimmune disease-related ILD with nintedanib (NINTE). However, data on antifibrotics use for RA-ILD are scarce. Our aim was to assess efficacy of NINTE and pirfenidone (PIRFE), and to compare the profile of clinical practice (CP) RA-ILD patients with those included in INBUILD trial.

**Methods:** National multicenter study of RA-ILD patients to whom NINTE or PIRFE were added due to progressive fibrosing ILD. Demographic and clinical variables were compared with those of RA-ILD patients in INBUILD trial

**Results:** Comparison of baseline characteristics of RA-ILD patients treated with NINTE in CP and in INBUILD trial shown in **Table**. Comparison of FVC values shown in **Figure**

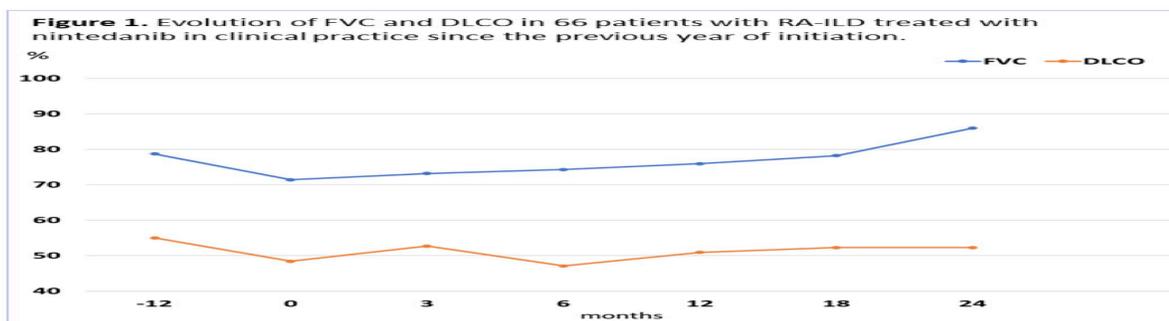
After a median follow-up of 15.5 [3.5-23.5] months, no significant decline in mean FVC or DLCO values was observed. In addition, 86% of patients presented stabilization/improvement of dyspnea. NINTE was withdrawn in 14 patients due to gastrointestinal adverse events(11), death(1), hemorrhage risk 1), and stabilization(1).PIRFE was administered to 7 patients, combined with ABA in 3 patients,LEF in 1, and MTX in 1. Mean baseline FVC and DLCO were 69±22 and 49±14 % pred. respectively. As with NINTE, stability in evolution of lung function was observed. PIRFE was withdrawn in 4 patients due to: gastrointestinal adverse events(2), inefficacy(1), and stabilization(1). NINTE was the most widely used antifibrotic (n=66), combined with immunosuppressants in all cases. Mean FVC one year before NINTE start: 80±21 (% pred.), whilst mean baseline FVC: 71±23 (% pred.).

**Table 1:**

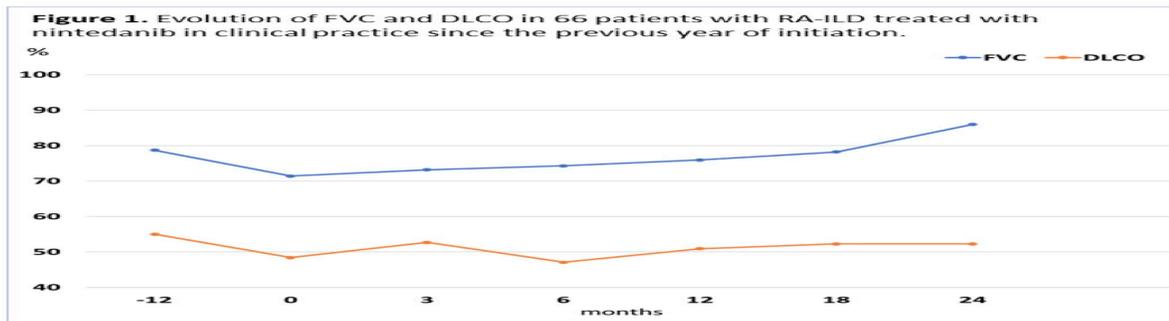
Baseline characteristics of RA-ILD patients treated with NINTE in clinical practice and RA-ILD patients included in the INSULID trial	Clinica practice (n=66)	INSULID
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Age, years mean $\pm$ SD	68.7 $\pm$ 8.8	66.9 $\pm$ 9.6
Women, n(%)	29(43.9)	35(39.3)
Smoker	74(71)	57(64)
Time since ILD diagnosis, years mean $\pm$ SD	4.8 $\pm$ 4.1	3.6 $\pm$ 3.2
RF, n (%)	60(91)	
ACPA, n(%)	55(83)	
FVC, mean $\pm$ SD	71.4 $\pm$ 22.6	71.5 $\pm$ 16.2
DLCO, mean $\pm$ SD	49.1 $\pm$ 13.9	47.7 $\pm$ 15.6
mMRC, median [IQR]	2[2-3]	
UIP-like fibrotic pattern, n (%)	42(63.6)	77(86.5)
Immunosuppressive therapy, n(%)	66(100)	79(88.8)
Glucocorticoids	44(66.7)	65(73)
cDMARD	20(30.3)	48(53.9)
bDMARD	43(65.1)	19(21.3)
JAKi	4(6.1)	

**Image 1:**



**Image 2:**



**Conclusion:** Antifibrotics, especially NINTE, seem to slow ILD progression in patients with RA-ILD. Combination of antifibrotics and DMARDs is feasible and safe.

**Disclosure of Interest:** None Declared

**Keywords:** None

## PANLAR 2024

### Pediatric Rheumatology

#### PANLAR2024-1482

#### Dramatic Response To Thalidomide In A Pediatric Patient With Generalized Discoid Lupus

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#### Has this paper been previously presented at another conference?: No

**Background/Objectives:** In children, generalized discoid lupus erythematosus (DLE) is less common than in adults; however, it is associated with systemic lupus erythematosus (SLE) in a higher percentage. Sometimes, despite optimal immunosuppressive treatment that positively impacts extracutaneous involvement, DLE improvement is not achieved, requiring an expansion of the therapeutic armamentarium. In medical literature, the use of thalidomide in DLE as second-line therapy is described. Aim: A case report of a patient with SLE and generalized DLE is presented, who, despite achieving control of the extracutaneous manifestations with immunosuppressive therapy, required additional treatment with thalidomide with an excellent response.

**Methods:** Case report

**Results:** Female, 13 years old, diagnosed with SLE in 2015 at six years of age, because of mucosal ulcers, generalized DLE, photosensitivity, cytopenias, lupus nephritis class IV, ANA 1:1280 peripheral pattern, anti DNA 1:320 and positive antiRNP, antiSm and antiRo antibodies. She had difficult to treat lupus nephritis with persistent nephrotic syndrome. She was treated with cyclophosphamide for induction, followed by mycophenolate mofetil and rituximab, which was administered in 2020, achieving remission of nephritis in April 2021. Since disease onset, she presented generalized DLE in photoexposed areas (scalp, face, auricle, upper extremities, and anterior thorax), persistent despite systemic treatment and topical therapy (steroids and tacrolimus). Therefore, belimumab was started in January 2022. Eight months later, the lesions persisted, particularly on the face and scalp (see image 1), with notable aesthetic consequences, emotional impact, and difficulties in social interaction and school performance. Thalidomide 2 mg/kg/day was indicated with excellent response after two months of treatment with progressive improvement; currently (see image 2), she has just residual cutaneous lesions with a very noticeable improvement in alopecia. The treatment was well tolerated, and no peripheral neuropathy or other complications were documented.

**Image 1:**



**Image 2:**



**Conclusion:** In this patient, thalidomide was an effective and safe alternative for the treatment of generalized DLE. Although experience is limited to reports and case series, this medication may be a choice when systemic immunosuppression for extracutaneous manifestations does not improve skin lesions.

**Disclosure of Interest:** None Declared



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**Keywords:** discoid lupus erythematosus, Thalidomide

## PANLAR 2024

### Pediatric Rheumatology

#### PANLAR2024-1483

### Early Onset Systemic Lupus Erythematosus: Clinical Phenotypes According To Age Of Onset And Family History Of Lupus

Marcela Alvarez<sup>\*1</sup>, Laura Guerini<sup>1</sup>, Silvia Meiorin<sup>1</sup>, Ayelen Ojeda Silva<sup>1</sup>, Graciela Espada<sup>1</sup>

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#### Has this paper been previously presented at another conference?: Yes

**Background/Objectives:** Fifteen to twenty per cent of patients with SLE start their illness before 18 years of age. In children under 10 years of age, SLE has been associated with a more severe disease. Data on clinical expression of SLE pts and family history of lupus is still scarce.

**Objectives: 1)** To describe and compare clinical phenotypes of presentation, course and prognosis of SLE pts regarding age of onset **2)** To describe pedigree and clinical findings in familial lupus

**Methods:** Retrospective, observational study. Patients with SLE (ACR'97) < 18 years of age were included. Period 2000-2022. SLE patients were grouped according to age of onset: ≤10 ys early-onset SLE (eoSLE) and >10 ys juvenile SLE (jSLE). Demographic, clinical, laboratory, therapeutic and mortality variables were analyzed. Organic damage by SLICC'96. Familial aggregation of autoimmunity (AI) was determined focusing on familial lupus. **Statistical Analysis:** Descriptive, Chi<sup>2</sup> –T test. SPSS 19.0

**Results:** 254 pts with SLE were included, 213 (84%) female, median age at diagnosis 13.3 ys (IQR: 10.9-14.8) and follow-up median time 4 ys (IQR: 2- 6.2). Family history of AI was observed in 100 pts (39%) and familial lupus in 30 pts (12%). Clinical phenotype at onset was compared. Children ≤10 ys (n=70, 28%) had a sudden onset of the disease and less delay in diagnosis (median 2 months IQR:1-4.3 p.003), more hematological compromise at debut (90 vs 74% p.003) compared to jSLE. They also required combined treatment with steroids pulses and iv. cyclophosphamide 58 vs 44% (p.027). In evolution, eoSLE developed complications: major infections 57 vs. 43%, (p.03) (as Herpes Zoster), more admissions to ICU 26 vs. 14% (p.019) and development of Macrophage Activation Syndrome (MAS) 13 vs 4% (p.012). At last visit, eoSLE group presented more organ damage 47 vs. 34% (p.032) and active disease 39 vs. 16% (p.014). Family history of AI 53 vs. 21% (p.048) and familial lupus 39 vs. 10% (p.003).

**Conclusion:** In our cohort of 254 patients, the eoSLE group had a more severe clinical disease: sudden onset, hematological compromise and complications (infections, ICU admission and SAM). Greater prevalence of AI history and familial lupus (21%) were observed, compared to juvenile SLE group. Particularly in eoSLE group (severe disease and familial genetic background), it is important to determine the genetic profile and cytokine expression for a more personalized treatment.



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**Disclosure of Interest:** None Declared

**Keywords:** Early Onset Systemic Lupus Erythematosus, Familial aggregation of autoimmunity, Family History Of Lupus

## PANLAR 2024

### Epidemiology (including socioeconomic, socio-cultural and gender equity studies)

#### PANLAR2024-1485

#### Frequency And Factors Associated With Lung Involvement In Systemic Sclerosis: A Retrospective Cohort Study.

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<sup>1</sup>Universidad Nacional de Colombia, <sup>2</sup> Reumavance Group, Fundación Santa Fe de Bogotá, University Hospital, <sup>3</sup> Hospital Universitario Nacional, University Hospital, Bogotá, Colombia

#### Has this paper been previously presented at another conference?: Yes

**Background/Objectives:** Systemic sclerosis (SS) frequently compromises either the parenchyma or the pulmonary vasculature; both Interstitial Lung Disease (ILD) and Pulmonary Arterial Hypertension (PAH) associated with SS are the leading causes of death. In Colombia, the disease has a prevalence rate of 23.7 cases per 100,000 individuals; there is currently no available data regarding the specifics of lung involvement in this population(1, 2).

This study aims to identify the clinical characteristics of the population and associations or risk factors in patients with SS and pulmonary involvement.

**Methods:** We conducted a retrospective study of patients with SS and pulmonary involvement in two care centers in Bogotá. Patients with a diagnosis of SS established by the 2013 classification criteria or those with an early variety who had lung involvement documented by imaging for ILD or right heart catheterization for PAH were included. Participants were identified using the ICD-10 codes, and their clinical records were manually reviewed to register the corresponding variables on a REDCap-based database.

**Results:** We examined data from 169 patients, of whom 79 (38.5%) experienced pulmonary complications. Among these, 57 ILD, 29 PAH, and 7 individuals had both ILD and PAH. Most of our study participants were female (91.7%), with limited SSc being the most prevalent subtype of the disease (50.9%), followed by diffuse (28.4%) and early SS (14.2%). We observed that in patients with pulmonary complications, anticentromere antibodies were linked to the development of PAH but not ILD. Additionally, telangiectasias were associated with overall lung involvement. For a more comprehensive breakdown of our analysis, please refer to Table 1.

#### Table 1:



Characteristic	OR	95% CI	P Value
Age	1.02	0.99-1.06	0.18
Male	0.59	0.09-3.69	0.57
LcSS	0.25	0.07-0.81	0.042
Sine scleroderma	0.12	0.01, 0.93	0.063
Early	0.10	0.02, 0.49	0.007
Telangiectasias	4.58	1.57-14.2	0.006
Gastrointestinal	1.76	0.66-4.72	0.26
Digital ulcers	0.38	0.09-1.61	0.20
ACA*	0.03	0.00-0.17	0.001
ACA†	36.3	5.49-74.7	0.002

LcSS: Limited cutaneous Systemic Sclerosis, ACA: anti centromere \*Anti-centromere behavior when evaluating patients with ILD, †Anti-centromere behavior in patients with PAH.

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**Conclusion:** Our study found that telangiectasias were associated with the development of pulmonary complications in the form of ILD and PAH; ACA positivity is related to PAH, and ILD is less likely to develop. Colombian SS patients experience similar factors associated with the disease as other populations.

**Reference 1:** Elhai M, Meune C, Boubaya M, Avouac J, Hachulla E, Balbir-Gurman A, et al. Mapping and predicting mortality from systemic sclerosis. *Ann Rheum Dis.* 2017;76(11):1897-905.

**Reference 2:** Fernández-Ávila DG, Bernal-Macías S, Gutiérrez JM, Rincón DN, Rosselli D. Prevalence of systemic sclerosis in Colombia: Data from the National Health Registry 2012-2016. *J Scleroderma*

**Disclosure of Interest:** None Declared

**Keywords:** interstitial lung disease, pulmonary arterial hypertension, systemic sclerosis

## PANLAR 2024

### Spondyloarthritis

#### PANLAR2024-1487

#### Direct Medical Costs Of Spondyloarthritis In Colombia: A Real-World Evidence Study

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<sup>3</sup>Internal Medicine, Universidad Nacional de Colombia, <sup>4</sup>School of Medicine, Universidad El Bosque, Bogota, Colombia

#### Has this paper been previously presented at another conference?: No

**Background/Objectives:** Spondyloarthritis (SpA) are a group of heterogeneous chronic inflammatory conditions, sharing genetic, epidemiological and extra-musculoskeletal manifestation, as well as therapeutic options. This condition, has been associated not only with functional impairment and negative impact on quality of life, but also with increasing health-care costs. The aim of the study is to estimate the prevalence and direct medical costs of SpA using administrative health data at country level in Colombia

**Methods:** This real-world evidence (RWE) study analyzed administrative databases from the Colombian Health System during 2018 including National Claim Database, Drug Price Information System and Affiliate Database (figure 1). Prevalence, marginal, incremental, and overall attributable costs were determined using validated algorithms with sensitive and specific identification criteria. The performance of the algorithms was forced to a rigorous validation procedure and evaluated with a deterministic sensitivity analysis. Prevalence was assessed on adults with SpA who were affiliated through contributory health system during 2018. Medical costs were assessed from the payer's perspective for the following health services: diagnosis, outpatient and inpatient appointments, emergency, homecare and treatment. Propensity score matching (PSM) and doubly robust estimation were employed to pair patients based on sociodemographic and clinical variables, creating a quasi-experimental sample for estimating the cost-of-illness (COI) for SpA

**Results:** The estimated SpA prevalence was 0.66% (n=79,775). Using the specific strategy including medication as an inclusion criterion, the prevalence was 0.21% (n=25,727) (figure 2). The overall attributable costs ranged from USD 218,419,996 (n=79,775) to USD 156,532,798 (n=25,727). The attributable costs related to pharmacological treatment was 54.9% and 76.6% in the sensitive and specific groups, respectively. After adjusting for PSM, the marginal cost per year per patient was USD 2,736 to USD 6,083. Each SpA patient charges an incremental cost of USD 1,989 and USD 5,293 on the national healthcare system

#### Image 1:

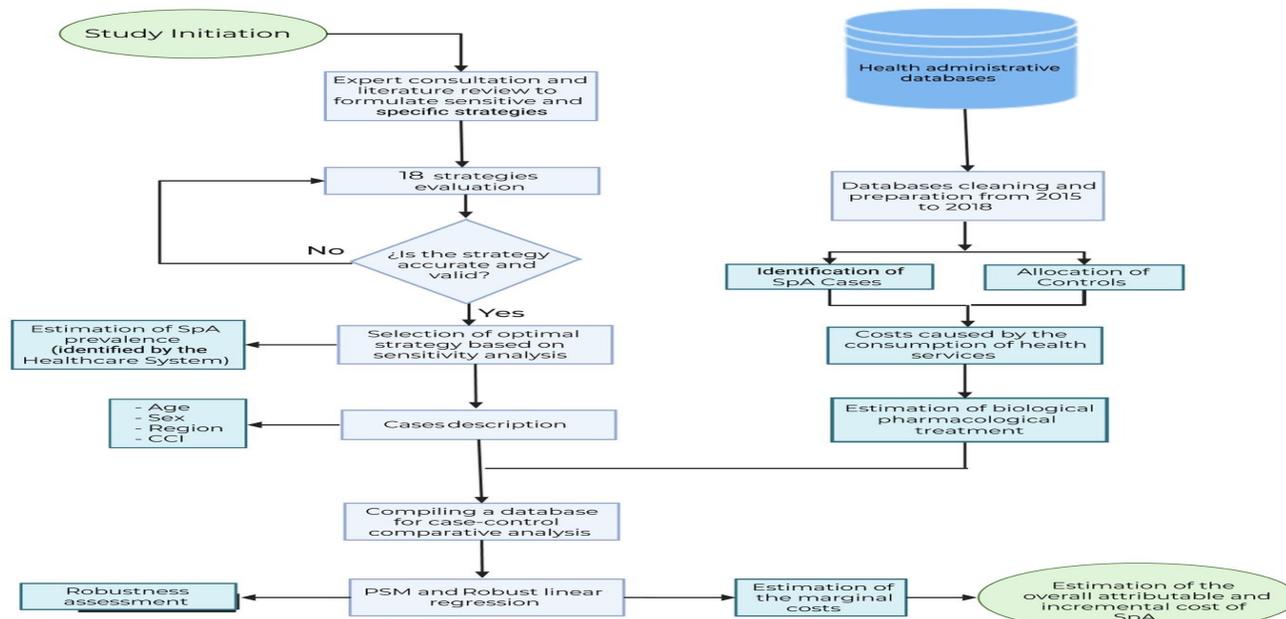


Figure 1. Study Procedure Algorithm  
Spondyloarthritis (SpA), Charlson Comorbidity Index (CCI), Propensity Score Matching (PSM).

Image 2:

Figure 2. Sensitivity Analysis of the Prevalence of Spondyloarthritis in Colombia 2015-2018

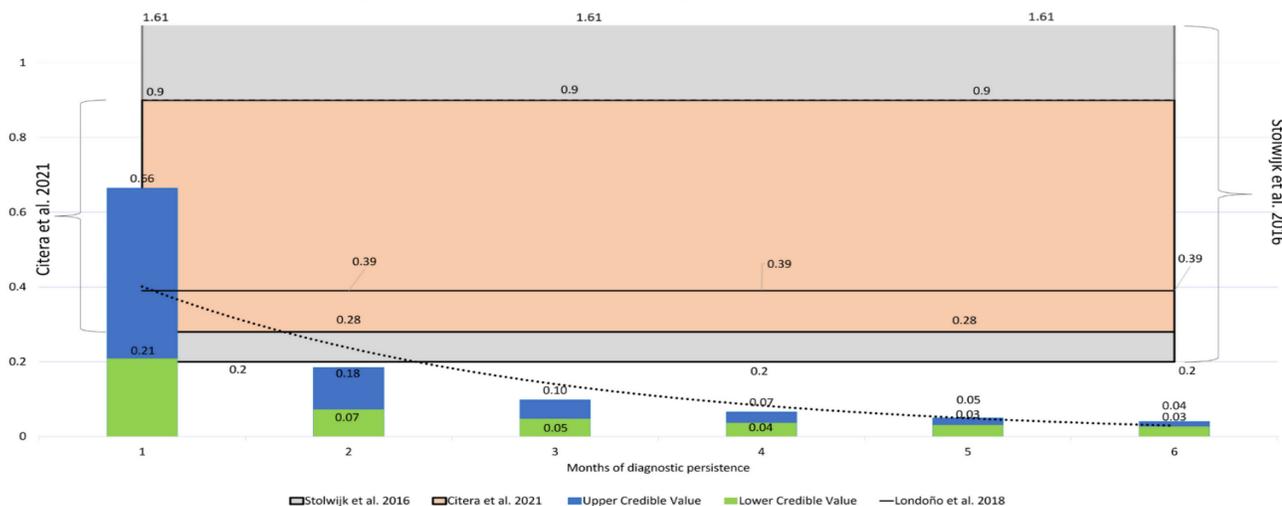


Figure 3. Sensitivity Analysis of the Prevalence of Spondyloarthritis in Colombia 2015-2018. The gray area corresponds to Stolwijk et al. 2016, where prevalence was estimated through a systematic review and meta-analysis encompassing countries globally, yielding estimates ranging from 0.20% to 1.61%, contingent upon the region and population. The orange area represents Citera et al. 2021, which comprises a compilation of studies in Latin America reporting a prevalence between 0.28 to 0.9%. The dashed black line corresponds to Londoño et al. 2018, where prevalence was computed via the COPCORD strategy, resulting in an overall prevalence of 0.39%, which includes ankylosing spondylitis (0.28%) and undifferentiated SpA (0.11%). Patients were identified using a validated electronic case-selection algorithm, ensuring the selection of the most appropriate strategy with both high sensitivity (blue bars) and specificity (green bars).

**Conclusion:** This is one of the first studies reporting a robust algorithm for estimating prevalence and direct medical costs for SpA. The direct medical costs associated with SpA in health-care system in Colombia is substantial. Health policies aimed to strategic resource allocation may have an important role for the sustained effectiveness of the national healthcare system



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**Reference 1:** Kwan YH, et al. The direct and indirect costs of axial spondyloarthritis in Singapore. *Int J Rheum Dis.* 2020 Mar;23(3):334-341

**Disclosure of Interest:** None Declared

**Keywords:** direct cost, Economic burden, prevalence

## PANLAR 2024

### Vasculitis and related diseases

#### PANLAR2024-1488

#### Primary Vasculitis Of The Central Nervous System: Diagnostic Approach To A Rare Pathology.

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<sup>1</sup>Internal Medicine, <sup>2</sup>Magnetic resonance, <sup>3</sup>Rheumatology, Hospital Ángeles del Pedregal, Mexico City, Mexico

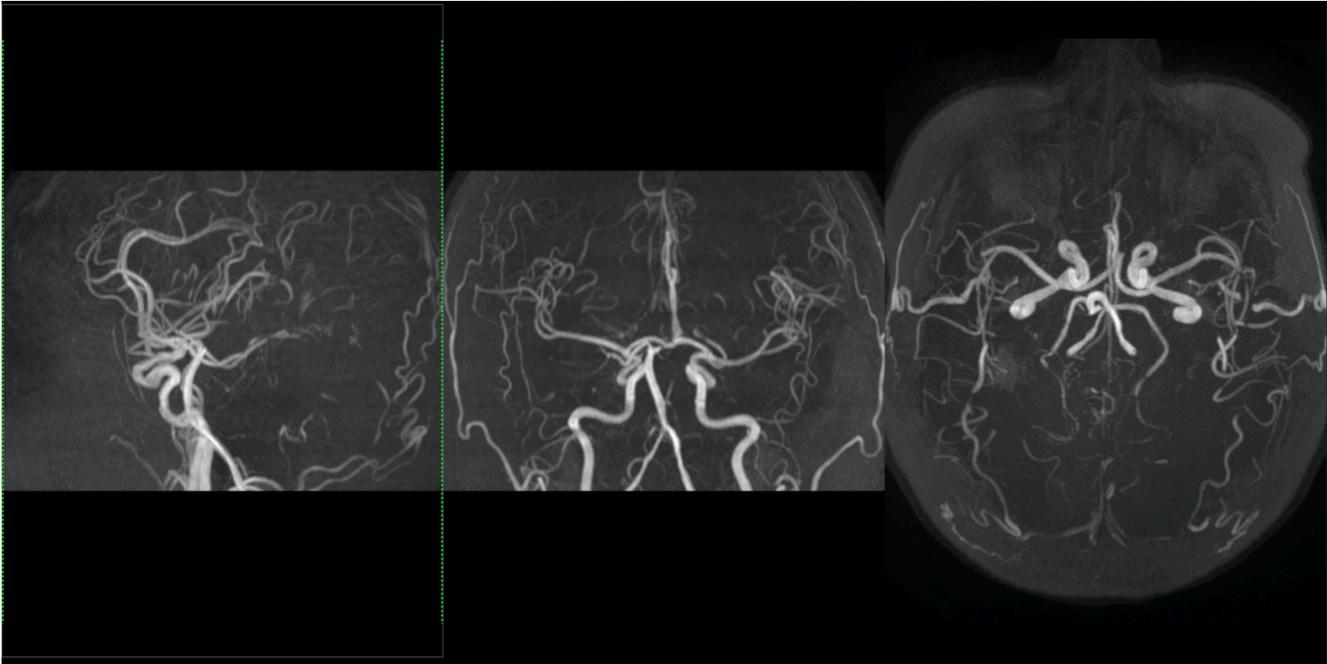
#### Has this paper been previously presented at another conference?: No

**Background/Objectives:** Primary vasculitis of the central nervous system is a rare pathology that is difficult to diagnose due to the wide variety of non-specific clinical manifestations and where is essential to rule out other types of more frequent pathologies, becoming a diagnosis of exclusion at the end. The gold standard for diagnosis is histopathological study and imaging studies such as angioresonance and cerebral panangiography are very useful once structural, infectious pathology and other secondary vasculitis have been ruled out.

**Methods:** Description of a clinical case and literature review.

**Results:** A case is presented of a female patient in the 5th decade of life who presented an episode of sudden, intense, throbbing headache, located in the temporoparietal region and radiating to the occipital, for which she went to the emergency department. Due to the persistence of the symptoms and the characteristics of the headache a magnetic resonance with brain angioresonance was performed, which showed data of right parietal and left frontal subarachnoid hemorrhage, irregularity of the middle cerebral artery and areas of stenosis in posterior cerebral arteries (**image 1**). Based on the previous findings, the diagnostic approach was completed to rule out structural, infectious and other secondary vasculitis. To complete the diagnostic approach and based on the findings of the magnetic resonance and resonance angiography, a cerebral panangiography by digital subtraction was performed in which beading of the posterior cerebral arteries was evident (**image 2**), thus establishing the diagnosis of a probable Primary vasculitis of the central nervous system.

#### Image 1:



**Image 2:**



**Conclusion:** Primary vasculitis of the central nervous system is usually of unknown etiology, exclusive to the central nervous system, affecting small and medium vessels, where the exclusion of other pathologies is essential before starting immunosuppressive treatment. It is important to emphasize that there are no specific clinical characteristics, classic clinical course or imaging studies that can confirm the diagnosis. Cerebral angiography is neither specific nor sensitive, but still supports the diagnosis in many published studies. There are currently no evidence-based treatment



recommendations, but the use of corticosteroids in combination with Rituximab or Cyclophosphamide has shown good results.

**Reference 1:** 1. Rice CM, Scolding NJ. The diagnosis of primary central nervous system vasculitis. *Practical Neurology* [Internet]. 2020 Apr 1;20(2):109–14. Available from: <https://pn.bmj.com/content/20/2/109>.

**Reference 2:** 2. Kraemer M, Berlit P. Primary central nervous system vasculitis – An update on diagnosis, differential diagnosis and treatment. *Journal of the Neurological Sciences*. 2021 May;424:117422.

**Disclosure of Interest:** None Declared

**Keywords:** central nervous system, diagnosis, VASCULITIS

## PANLAR 2024

### Osteoporosis

#### PANLAR2024-1491

### Association Between Use Of Disease-Modifying Antirheumatic Drugs And Sarcopenia In Patients With Rheumatoid Arthritis And Intermediate Or High Fracture Risk According To Frax Score.

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#### Has this paper been previously presented at another conference?: No

**Background/Objectives:** Rheumatoid arthritis (RA) and sarcopenia have shown conflicting results with disease-modifying antirheumatic drugs (DMARDs) treatment association. Some studies suggest an inverse association of conventional DMARDs with this muscle disease<sup>1</sup>. However, a recent meta-analysis found that DMARD treatment showed no positive impact on muscle mass<sup>2</sup>. RA and osteoporosis have been described as important risk factors for sarcopenia. We aimed to identify sarcopenia in RA patients using dual-energy X-ray absorptiometry (DEXA).

**Methods:** We conducted a prospective study on patients with RA with an intermediate or high fracture risk determined by FRAX. Sarcopenia was defined as a muscle mass percentage of  $\leq 7.0$  kg/m<sup>2</sup> in men and  $\leq 5.5$  kg/m<sup>2</sup> in women. We compared the muscle mass percentage of patients using 1 DMARD and the muscle mass percentage of patients using 2 or more DMARDs. Kolmogorov-Smirnov was performed to determine normality. We used mean  $\pm$  standard deviation (SD), median and interquartile range (IQR), or percent frequency, as appropriate. We considered a p-value  $< 0.05$  as statistically significant. We used SPSS v.25 for statistical analysis.

**Results:** We included a total of 32 patients with RA in our study, out of which 30 (93.8%) were women and 2 (4.3%) were men. The mean age of the patients was  $65 \pm 9.81$  years. We found that 18 (%) patients were prescribed more than 2 DMARDs. Clinical characteristics are described in **Table 1**. We identified 12 (37.5%) patients with sarcopenia. The muscle mass percentage median of patients using 1 DMARD was 5.81 (IQR 5.30 - 6.18) and the median of 2 DMARD was 5.58 (IQR 5.11 - 6.56). No statistically significant difference was found between groups ( $p=0.488$ ).

**Table 1:**

	n= 32
Antirheumatic drugs, n (%)	

Metothexate

25



Leflunomide	12
Sulfasalacine	4
Micophenolate acid	1
Hydroxicloroquine	6
<b>Prednisone use, n (%)</b>	<b>22 (87.5)</b>
<b>BMI, n (%)</b>	
Normal	15 (46.9)
Overweight	11 (34.4)
Obesity	6 (18.8)
<b>T score</b>	
Columna, mean (SD)	-1.656 ± 1.386
Cadera, mean (SD)	-1.309 ± 1.273
<b>FRAX, n (%)</b>	



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Intermediate risk	17 (53.1)
High risk	15 (46.9)
<b>Muscle mass percentage, median (IQR)</b>	<b>5.72 (5.21-6.17)</b>

**Conclusion:** In our high-risk population for sarcopenia, we did not observe any differences or associations between the use of one or more DMARDs and an increased or lower risk for sarcopenia. These results align with those previously described in patients with rheumatoid arthritis who do not have intermediate or high fracture risk.

**Disclosure of Interest:** None Declared

**Keywords:** DMARDs, FRAX, Risk Fracture

## PANLAR 2024

### Pediatric Rheumatology

#### PANLAR2024-1493

#### Development Of Complications In Children And Adolescents With Rheumatic Diseases And Covid 19. Argentine

#### Sar-Covid Pediatric Registry

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**Background/Objectives:** SARS CoV-2 infection in healthy children is a pauci-symptomatic disorder. However, in risk groups, such as children with rheumatic and/or immune-mediated diseases (RD – IMD), the development of complications can be observed. their identification will allow the development of prevention strategies in these patients.

**Objective:** -To describe the characteristics of SARS CoV-2 infection and its complications in children and adolescents with RD and/or IMD

**Methods:** Multicenter, observational, analytical, ambispective cohort study (Period 2020-2022). Patients < 18 years of age with diagnosis of RD and/or IM and COVID-19 confirmed by RT-PCR, rapid antigen-antibody test and/or IgM/IgG positive were included. Data analyzed: demographic, clinical, laboratory variables, complications, treatment and vaccination status. Statistical Analysis: Descriptive, Chi2. T-Test. Multivariate. SPSS19.0.

**Results:** 116 patients were included, 86 female (74%), median age 11.8 ys (IQR: 7.7-14.8). The prevalent RD: 53 JIA (46%), 17 Lupus (15%), 12 Dermatomyositis (10%) and 11 auto inflammatory diseases (9%). 85 patients (73%) presented symptoms: 63 fever (74%), 40 odynophagia (47%) and 28 cough (33%). 31 patients (27%) developed complications: RD flare (12 pts - 39%), cytopenias (6 pts - 19%), coagulopathy (4 pts - 13%) and COVID-19 pneumonia (4 pts - 13%). 14 pts (45%) were hospitalized. 4 patients (13%) had a severe evolution: 2 Macrophage Activation Syndrome, 1 Multisystem Inflammatory Syndrome MIS-C (admission to ICU) and 1 bilateral pneumonia with myocarditis. 16 pts (51%) requiring higher doses of steroids. All patients recovered, there were no deaths. Eighteen pts (58%) had complete vaccination. The development of complications was associated with cough at diagnosis (39 vs 19% p.048), soJIA (16 vs 2% p.014) and autoinflammatory disease (29 vs 2% p.0001), treatment with Cyclophosphamide (13 vs 1% p.02) and corticosteroids (48 vs 27% p.04). In multivariate analysis, the development of complications was associated with the presence of "at least one previous comorbidities" 32% vs. 11% (OR 3.5; 95% CI 1.52 – 43.56).

**Conclusion:** 27% of the cohort developed complications, related to COVID-19 infection or exacerbation of RD and/or IM. We must optimize immunization in all patients with greater emphasis on systemic diseases, such as soJIA and auto



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inflammatory diseases mediated by innate immunity and in patients with previous comorbidities, treated with cyclophosphamide and moderate/high doses of corticosteroids

**Disclosure of Interest:** None Declared

**Keywords:** Complications associated to COVID 19, Rheumatic Diseases And Covid 19

## PANLAR 2024

### Epidemiology (including socioeconomic, socio-cultural and gender equity studies)

#### PANLAR2024-1540

#### Status Of Vaccination In Rheumatoid Arthritis In Latin America: Preliminary Results Of An International, Real-World Life Panlar'S Register.

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#### Has this paper been previously presented at another conference?: No

**Background/Objectives:** To evaluate vaccination among patients with inflammatory rheumatic diseases initiating disease-modifying antirheumatic drugs (DMARD).

**Methods:** Data from the real-world life PANLAR's register of consecutive patients diagnosed with RA, PsA, and axSpa from Dec 2021 to Dec 2023 was analyzed. Prevalence of recommended vaccinations were compared between different inflammatory rheumatic diseases. Categorical variables were expressed as %. Tables of contingency were analyzed with  $\chi^2$  or Fisher test ( $p < 0.05$  was considered significant), continuous variables (median, IQR).

**Results:** Basal status of vaccination at the moment of begin a treatment of 1406 patients were included. Results among patients with rheumatoid arthritis (RA) psoriatic arthritis (PsA), and axial Spondyloarthritis (axSpA) are presented in the table. RA and axSpA seemed to have lower vaccination rate of pneumococcal vaccines than PsA ( $p < 0.00001$  and  $p = 0.0005$  for conjugate anti pneumococcal vaccine in PsA vs RA and axSpA). A large percentage of the population was vaccinated against COVID-19 without differences among groups. There was a medium rate of influenza vaccination and very low rate of herpes zoster vaccination in all three diseases.

**Table 1:** Vaccination rate in RA, PsA and axSpA Latin American patients

	RA n= 1209	PsA n= 93	axSpA n= 104
<b>Vaccination, n % (95%CI)</b>			
Pneumococcal conjugate vaccine	425/1170, 36.3% (33.7-39.1)	56/93, 60.21% (49.5-70.2)	37/104, 35.5% (26.4-45.5)
Pneumococcal non conjugate vaccine	586/1170, 50.1% (47.2-52.9)	53/93, 56.9% (46.3-67.2)	36/104, 34.6% (25.5-44.6)
Influenza vaccine	768/1171, 65.6% (62.7-68.3)	68/93, 73.1% (62.9-81.8)	65/104, 62.5% (52.5-71.8)
Hepatitis B vaccine	711/1156, 61.5% (58.6-64.3)	68/93, 73.1% (62.9-81.8)	67/104, 64.4% (54.4-73.6)
Tetanus vaccine	780/1149, 67.9% (65.1-70.6)	69/93, 74.2% (64.1-82.7)	63/104, 60.6% (50.5-70.1)
COVID 19 vaccine	1092/1209, 90.3% (88.5-91.9)	81/93, 87.1% (78.5-93.1)	88/104, 84.6% (76.2-90.9)
Herpes zoster vaccine	10/1175, 0.8% (0.04-1.5%)	1/93, 1.1% (0.02-5.8)	0



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**Conclusion:** In Latin America, anti-Pneumococcal vaccination is low, especially in RA and axSpA. For other vaccines, with exception of zoster vaccine, there was an acceptable level of vaccination without differences between diseases.

**Disclosure of Interest:** None Declared

**Keywords:** Registry, rheumatic diseases, Vaccination rheumatic disease