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A B S T R A C T S

# PANLAR ABSTRACTS 2024

## Featured oral presentations



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ABSTRACTS

## **ABSTRACTS PANLAR 2024**

## **Featured oral presentations**

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#### Systemic lupus erythematosus

PANLAR2024-1040

#### **Uncovering Variation In Systemic Lupus Erythematosus Risk Variants In Indigenous Peruvians**

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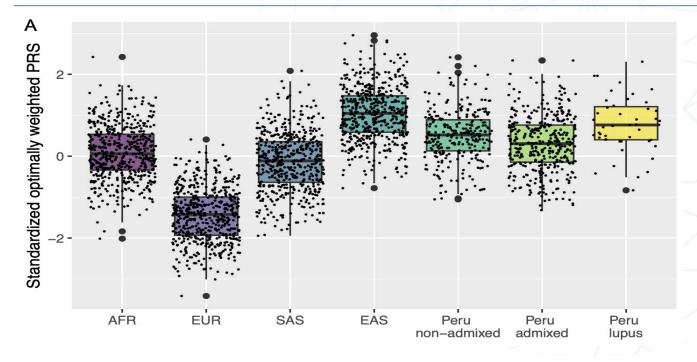
#### Has this paper been previously presented at another conference?: No

Background/Objectives: Systemic lupus erythematosus (SLE) is a complex autoimmune disease with genetic risk factors identified mainly in European and Asian populations. However, Indigenous Americans are underrepresented in genetic studies despite health disparities. The objective of this study is to compare polygenic risk of SLE between healthy Indigenous Peruvians (Coastal, Amazon, Andean) and continental populations (AFR, EUR, EAS, SAS) Methods: We studied 254 individuals with >95% Indigenous ancestry from the Peruvian Genome Project<sup>1</sup>, 2580 individuals from 1000 Genomes Project Phase 3 ancestries and 47 SLE cases from Lima, Peru. Genotyping was perfomed on Illumina HumanOmni Array. Imputed data was generaged on TOPMed server. We performed standard quality control metrics. We estimate Indigenous American ancestry (NAT) using Admixture and RFMix. SLE genetic risk score (GRS) were calculated based on SNP variants from the latest trans-ancestry SLE meta-analysis GWAS, with a total of 122 GWAS hits<sup>2</sup>. Different polygenic risk scores (PRS) were created: 1) Optimally weighted according to EUR or EAS ancestry, with other ancestries receiving trans-ancestry meta-analysis weights; 2) All participants receiving trans-ancestral meta-analysis weights, and 3) unweighted PRS score. We then performed comparion of PRS across Indigenous Peruvians, continental ancestry groups (AFR, EAS, EUR, SAS) and participants with SLE from Lima.

**Results:** Genetic principal components (PCs) from non-admixed Indigenous Peruvians cluster away and in different direction from AFR, SAS, EAS, and EUR. Peruvians have higher SLE PRS compared to AFR, EUR, and SAS individuals, regardless of admixture status (Fig. 1). Peruvians have highest SLE PRS when considering trans-ancestry weights or count of risk alleles. Randomly sampling (n=122) variants across genome and creating PRSs (1000 times) shows lower scores among non-admixed Indigenous Peruvians compared to others; the opposite of what is observed among SLE PRSs

Image 1:





**Conclusion:** Among healthy individuals, genetic risk of SLE is highest among East Asians, Peruvians (admixed and not), and Africans, agreeing with epidemiologic evidence of higher prevalence of SLE among these groups. Genetic risk of SLE is highest among non-admixed Peruvians when considering trans-ancestry weighted or unweighted PRSs. Indigenous Peruvian genomes may provide information about population genetics and positive selection of genetic variants that might contribute to differing rates of health conditions among Hispanics.

**Reference 1:** Borda V, Alvim I, Mendes M, Silva-Carvalho C, et al. The genetic structure and adaptation of Andean highlanders and Amazonians are influenced by the interplay between geography and culture. Proc Natl Acad Sci U S A. 2020 Dec 22;117(51):32557-32565. doi: 10.1073/pnas.2013773117. Epub 2020 Dec 4.

**Reference 2:** Wang, YF., Zhang, Y., Lin, Z. *et al.* Identification of 38 novel loci for systemic lupus erythematosus and genetic heterogeneity between ancestral groups. *Nat Commun* 12, 772 (2021).

#### Disclosure of Interest: None Declared

Keywords: genetics, Indigenous populations, systemic lupus erythematosus



#### Imaging

#### PANLAR2024-1138

#### Diagnostic And Predictive Value Of Pulmonary Ultrasound In The Assessment Of Interstitial Lung Disease In

#### **Systemic Sclerosis.**

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

**Background/Objectives:** More recently, it has been proposed that pulmonary ultrasound (US) may have a potential role in the assessment of ILD in patients with systemic sclerosis (SSc). **Despite the growing body of evidence supporting the utility of US in ILD,** there is no data regarding its potential role in both detecting ILD in subclinical stages and predicting the evolution of ILD in these SSc patients. Taking into account this gap of knowledge, we decided to investigate the validity of pulmonary US in detecting subclinical ILD in SSc and to determine its predictive value for ILD progression. **Methods:** 133 patients without respiratory symptoms and 133 healthy controls were included. Borg scale dyspnea index, Rodnan skin score (RSS) and pulmonary auscultation were performed. X-ray and respiratory function tests (RFT) were performed the same day. An expert rheumatologist blinded to clinical assessment performed the US. To determine the concurrent validity high-resolution CT (HRCT) scans was performed. HRCT findings were scored according to Warrick score whereas US findings were classified according the previously proposed scale. An inter-observer reliability was performed. A follow-up including US, RFT and Borg scale was done every 3 months for 12 months. **Results:** A total of 54 of 133 patients (40.6%) showed US signs of ILD in contrast to healthy controls (4.8%) (p=0.0001). The clinical and laboratory variables associated with ILD were anti-centromere antibodies (p=0.005) and RSS (p=0.004). A positive correlation was demonstrated between the US and HRCT findings (p=0.001). Sensitivity and specificity of US in detecting ILD was 91.2% and 88.6% respectively. A good inter-observer reliability was observed (k = 0.72).

In the follow-up, a total of 30 patients (22.6%) that demonstrated US signs of ILD at baseline showed US worsening. Nine patients (30%) developed symptoms of ILD.

**Conclusion:** US showed a high prevalence of subclinical ILD in SSc patients. It demonstrated to be a valid, reliable and feasible tool to detect ILD in SSc and to monitoring the disease progression or response to therapy. **Reference 1:** Gutierrez M, Salaffi F, Carotti M, Tardella M, Pineda C, Bertolazzi C et al. Utility of a simplified ultrasound assessment to assess interstitial pulmonary fibrosis in connective tissue disorders--preliminary results. Arthritis Res Ther 2011;13:R134.

#### Disclosure of Interest: None Declared

Keywords: systemic sclerosis, pulmonary ultrasound, high-resolution CT, interstitial lung disease



#### Fibromyalgia and pain

#### PANLAR2024-1174

#### Latin American Rheumatologist Awareness And Perception Of Fibromyalgia - Fibrolatam Survey

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

**Background/Objectives:** The perception of fibromyalgia (FM) has been a debate within the medical community and patients. Surveys conducted among rheumatologists show that rheumatologists are not willing to take cases of patients diagnosed with fibromyalgia(1) and are not completely satisfied with the management of the disease or it is inadequate(2). In Latin America there is not enough evidence to explore this perception. The purpose of the study was to determine the perception of rheumatologists in Latin America regarding fibromyalgia.

**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 graduated from rheumatology fellowship in Brazil 31.3% and Argentina 27.4%. The main focus of practice in general adult's rheumatology was 98.5% and 1.5% pediatric rheumatology. Fibromyalgia was the reason of consult in 26%. Rheumatologist were able to denied FM consults in 23.3%, 12.2% did not have the approval to denied consults and 64.5% did not denied FM consults. 60.8% agreed that rheumatologists should follow-up patients with established diagnosis of FM, and remain as the primary service of care with 30.4%; however, 34.8% agreed that care should be multidisciplinary. 48.1% agree that fibromyalgia is primarily a psychosocial condition, and 42.3% strongly disagree that FM is an objectively defined condition. The most used guideline was EULAR 2017 in 44.7%, followed by ACR 2010 in 37.6% and Canadian 2012 in 0.7%; 30.87% reported not using the guidelines. Regarding the use of validated questionnaires, 51% of rheumatologists did not use any, 16% FIQR, 14% PHQ/GAD, 3.5% FIQ, PDS 3% and 5% all of them. **Conclusion:** This is the first preliminary report of the perception of rheumatologists of Latin America towards fibromyalgia. The rheumatologist of the region consider that fibromyalgia should be followed by the speciality along with multidisciplinary teams. The majority of rheumatologist do not use the validated questionnaires for FM evaluation, however, 30.8% follow the recommended guidelines.

Reference 1: Ghazan-Shahi S et al. Clin Rheumatol. 2012 Aug;31(8):1177–81.

Reference 2: Perrot S et al. BMC Health Serv Res. 2012 Dec;12(1):356.



#### **Disclosure of Interest:** None Declared

Keywords: Fibromyalgia diagnosis



#### **Psoriatic arthritis**

PANLAR2024-1180

#### Decoding The Complexity Of Refractory Psoriatic Arthritis: Results From A Global Healthcare Survey Informed By

#### Grappa Specialists' Expertise

Andre Lucas Ribeiro<sup>\* 1</sup>, Shikha Singla<sup>2</sup>, Vinod Chandran<sup>3</sup>, Nicholas Chronis<sup>4</sup>, Wilson Liao<sup>5</sup>, Christine A Lindsey<sup>6</sup>, Enrique R Soriano<sup>7</sup>, Philip J Mease<sup>8</sup>, Fabian Proft<sup>9</sup>

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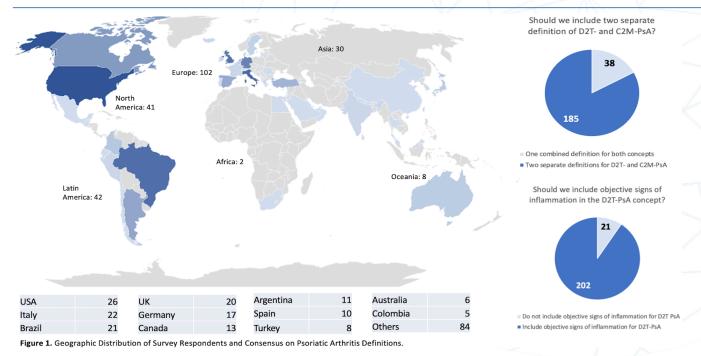
#### Has this paper been previously presented at another conference?: No

**Background/Objectives:** The Group for Research and Assessment of Psoriasis and Psoriatic Arthritis (GRAPPA) aims to establish a consensus definition for difficult-to-treat psoriatic arthritis (D2T-PsA). This study presents the perspective of healthcare professionals who are GRAPPA members, underscoring their expertise in the area, as a vital component of this initiative. These insights will play a crucial role in informing the D2T PsA project.

**Methods:** Conducted from September to October 2023, an online survey was administered to GRAPPA members using Research Electronic Data Capture (REDCap). It targeted professionals actively managing PsA and consisted of demographic questions, structured queries, and open-ended sections. The structured responses were analyzed descriptively, while thematic analysis was applied to the open-ended responses.

**Results:** The survey collected responses from 223 professionals across 47 countries (**Figure 1**), including 179 rheumatologists and 40 dermatologists. A notable 82.5% agreed on the necessity for separate definitions of D2T-PsA, characterized by persistent inflammatory activity, and Complex-to-Manage PsA (C2M-PsA), influenced by non-inflammatory factors leading to treatment failure. The factors contributing to D2T- and C2M-PsA varied, albeit with several overlaps. Most respondents (90.5%) agree on including objective signs of inflammation in the definition, with 69.5% supporting imaging methods like ultrasound (51.1%) and MRI (43.4%). However, there was no consensus about the inclusion of laboratory inflammatory markers, with a near-even divide for and against. Criteria for treatment failure varied, with 41.7% favoring the definition of failing at least one conventional synthetic disease-modifying anti-rheumatic drugs (csDMARDs) and two or more biological/targeted synthetic DMARDs (b/tsDMARDs) with different mechanisms of action (**Figure 2**). The inclusion of D2T-PsA.







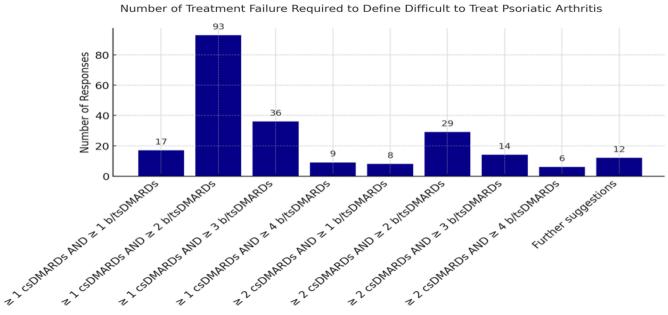


Figure 2. Distribution of GRAPPA Experts' Opinions on DMARD Failure Criteria for D2T-PsA.

**Conclusion:** The survey underscores a strong consensus among GRAPPA experts on differentiating D2T-PsA from C2M-PsA, emphasizing the importance of including objective signs of inflammation in the definition of D2T-PsA. The varied opinions on treatment failure criteria highlight the complexity of defining D2T PsA, indicating a need for more nuanced and individualized treatment approaches.



#### **Disclosure of Interest:** None Declared

Keywords: Drug resistance, Psoriatic arthritis, Treatment refractory



#### Systemic lupus erythematosus

#### PANLAR2024-1182

Values Of Lupus Language To Strengthen The Synergy Between The Doctor And The Sick Person During The

#### **Treatment Of Lupus**

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

**Background/Objectives:** One of the biggest challenges facing SLE is diagnosis. Thus, timely doctor-patient communication is vital. Whoever receives a diagnosis of this disease usually faces a period of uncertainty, during which they do not know exactly what they are suffering from. This, combined with the ravages of the disease, makes it difficult to follow treatment. Therefore, knowing the language of the patient offers autobiographical spheres that positively affect the treatment of the disease. The **objectives** are to analyze the discursive language patterns in the doctor-patient dialogic relationship, and the conceptualizations about the disease, live and pain based on autobiographical narratives. **Methods:** Mixed longitudinal study. From 2015 to 2023, people with SLE from Mexico, Latin America, the United States, and Europe were invited to participate. Autoethnography techniques and in-depth interviews were used for the qualitative part and a digital survey for the quantitative part. A critical-linguistic analysis of the discourse was carried out. Through Grounded Theory, six conceptual categories were derived that allowed classifying the profiles and language of people with lupus.

**Results:** The corpus is 352 testimonies from people between 11 and 65 years of age. The sample was observed for 8 continuous years. In the case of long-term interviews, 22 were carried out. The analysis includes a digital survey by 330 people and allowed us to define the relationship between emotion and discourse throughout the disease, before and after the diagnosis, from both positions: doctor and patient. A discursive corpus was concentrated that allowed us to derive "Gradations of pain" and a Dictionary of Lupic Language.

**Conclusion:** From the findings of this research, various ways of exploring the disease emerge from the conceptualizations of SLE that are created throughout the life history of the person with lupus, before and after diagnosis, with visible features in their narratives, and a particular vocabulary linked to the disease. This language defines the ways in which the person's self-changes, when and at what times the person adheres or does not adhere to the treatment. Some of the research findings are an existential itinerary that coexists with medical knowledge, as well as a proposal for doctor-sick person communication.

\*\*From the research "Counternarratives to discursive violence: The case of people with lupus" (ICSyH, Athié, 2023), awarded Cum Laude.



#### Disclosure of Interest: None Declared

Keywords: doctor-patient dialogic relationship, Lupus Languaje, treatment



#### Sjogren's and other systemic autoimmune diseases

#### PANLAR2024-1273

#### Autologous Hematopoietic Stem Cell Transplantation Complications In Systemic Sclerosis Patients.

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

**Background/Objectives:** Systemic sclerosis (SSc) is, in some cases, a devastating disease. EULAR and the American Society of Blood and Marrow Transplantation recommend autologous hematopoietic stem cell transplantation (AHSCT) for rapidly progressive SSc patients with risk of organ failure. The SCOT study showed an 88% survival rate in the transplant patient arm, 92% of whom did not disease relapse and did not require immunosuppressive drugs. SCOT, ASTIS and the ASIST trials showed infectious complications and transplantation related mortality of 3% - 10% within the first three years after the AHSCT.

**OBJECTIVE:** To describe frequency of AHSCT complications in our SSc cohort patients

**Methods:** Retrospective and descriptive study. We evaluated records of 9 rapidly progressive diffuse SSc (RP-dSSc) patients treated with AHSCT. We determined gender, age, age at diagnosis of SSc, disease duration, and disease duration at transplantation moment. We defined RP-dSSc patients: disease duration less than 5 years, basal modified Rodnan Skin Score (mRSS) >15 points with or without other organ damage. We described AHSCT related complications: infectious and no infectious complications, time to presentation after AHSCT, treatments for this complications and outcomes. Statistical analysis: frequencies, means and medians. We considerate significance statistical a p value of <0.05.

**Results:** We included 9 dSSc patients treated with AHSCT, 7 women with mean age of  $47.8 \pm 8.4$  years, mean age at diagnosis of  $41.7 \pm 5.7$  years, mean SSc duration of  $61.9 \pm 56.0$  months and median disease duration at AHSCT moment of  $3.5 \pm 3.7$  years. Eight were defined as RP-SSc. Four of 9 patients had AHSCT related complications and the complications occurred within 15 days after transplantation. One patient suffered a septic shock with reversible leucoencephalopathy that required critical care unit with broad spectrum antibiotics, antivirals and antifungal drugs with favorable outcome and complete recovery. The other 3 patients had no infectious complications: 2 presented serum sickness and 1 patient had engraftment syndrome with a favorable response to high doses of glucocorticoid. **Conclusion:** AHSCT complications are frequent. All patients had favorable outcomes.We must carefully select the SSc patients that are referred to AHSCT to optimized outcomes with a multidisciplinary team expert in SSc patient's and AHSCT management.

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#### Disclosure of Interest: None Declared

Keywords: Stem cell transplantation, Systemic Sclerosis, Treatment



#### **Rheumatoid arthritis**

#### PANLAR2024-1286

#### Patterns Of Use Of Biologic Dmards And Small Molecules In Patients With Inflammatory Arthritis: Combined Data

#### From Four Countries Of Latin America

Carolina Isnardi<sup>\* 1</sup>, Paloma de Abreu<sup>2</sup>, Vijaya Rivera Terán<sup>3</sup>, Maria Celina De la Vega<sup>1</sup>, María Agustina Alfaro<sup>1</sup>, Julieta Gamba<sup>1</sup>, Edson Javier Velozo<sup>1</sup>, Guillermo Ariel Berbotto<sup>1</sup>, Mercedes de la Sota<sup>1</sup>, David Vega Morales<sup>3</sup>, Iris Colunga Pedraza<sup>3</sup>, Sandra Sicsik Ayala<sup>3</sup>, Angel Castillo Ortiz<sup>3</sup>, Fedra Irazoque Palazuelos<sup>3</sup>, Sonia Cabrera<sup>2</sup>, Gabriela Ávila<sup>2</sup>, Vannia Valinotti<sup>2</sup>, Mariela Zarza<sup>2</sup>, Angelica Amarilla<sup>2</sup>, Evelin Leiva<sup>2</sup>, Cristina Brunengo<sup>4</sup>, Darwin Cordovilla<sup>4</sup>, Macarena Soto<sup>4</sup>, Belem Acevedo<sup>4</sup>, Pamela Velázquez<sup>4</sup>, Mariela Harguindeguy<sup>4</sup>, Deshire Alpizar<sup>3</sup>

<sup>1</sup>On behalf of Biobadasar Registry, Argentine Society of Rheumatology, CABA, Argentina, <sup>2</sup>On behalf of Biobadaguay Registry, Paraguayan Society of Rheumatology, Asunción, Paraguay, <sup>3</sup>On behalf of the Biobadamex Registry, Mexican College of Rheumatology, Mexico DF, Mexico, <sup>4</sup>On behalf of Biobadaguay Registry, Uruguayan Society of Rheumatology, Montevideo, Uruguay

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

**Background/Objectives:** Availability of biological (b) DMARDs and small molecules differ in countries from Latin America, which affects physicians' prescription. Additionally, in the last few years, biosimilars and generic targeted synthetic (ts) DMARDs have been introduced. The aim of this study was to describe the initiation patterns of b-/ts-DMARDs in patients with immune-mediated inflammatory arthritis (IIA) in four countries of Latin America (LA) and compare the situation between countries.

**Methods:** Data from four BIOBADA (Adverse Events of Targeted Therapies in Rheumatic Diseases) Registries from LA were collected, including patients from Argentina, Mexico, Paraguay and Uruguay. For this analysis, those with rheumatoid arthritis (RA), psoriatic arthritis (PsA) and axial spondyloarthritis (axSpa) who had started at least one biological or small molecule drug until October 2023 were included.

**Results:** A total of 7727 treatments in 4767 patients have been included, 5448 (70.5%) from Argentina, 1085 (14.0%) from Mexico, 706 (9.1%) from Paraguay, 488 (6.3%) from Uruguay. Most of them were female (78.3%) with a mean age of 50.8 years (SD12.2). The most frequent IIA was RA (3920,82.2%), followed by PsA (454,9.5%), axSpa (393,8.2%).

Regarding biosimilars, they were introduced in Mexico in 2012 and in Argentina in 2019, including TNFi and RTX biosimilars. In Paraguay and Uruguay only TNFi biosimilars have been commercialized since 2016 and 2019, respectively. JAKi generics are available only in Argentina from 2020. Argentina and Mexico have a greater variety of drugs. The most frequently used drugs in all countries were TNF inhibitors, particularly as the first line of treatment. Globally, ABA was used in 9.5% of the treatments, JAKi original in 8.6% and IL-6i in 8.3%, and its frequency increases as 2nd and 3rd line (Table 1). When drug initiation was analyzed in time, the frequency of TNFi original decreased gradually when new drugs were introduced in each country. The use of JAKi has increased over time since its launch in each country. In Argentina a clear increase in the use of generic tofacitinib was observed since 2020, while the frequency of new regimens with original JAKi decreased (Figure 1).



#### Image 1:

Table 1. Types of b/ts-DMARDs used in each country in the BIOBADA registry.

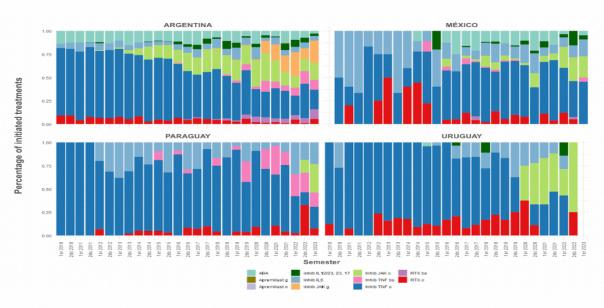
	Argentina (n=5448)	México (n=1085)	Paraguay (n=706)	Uruguay (n=488)	Total (n=7727)
Abatacept	580 (10.6%)	144 (13.3%)	-	1 (0.2%)	725 (9.4%)
Apremilast generic	1 (0.0%)	-	-	-	1 (0.0%)
Apremilast original	2 (0.0%)	-	-	-	2 (0.0%)
IL-12/23, 23, 17 inhibitors	96 (1.8%)†	22 (2.0%)††	-	4 (0.8%)†††	122 (1.6%)
IL-6 inhibitors	312 (5.7%)	157 (14.5%)	122 (17.3%)	42 (8.6%)	633 (8.2%)
JAK inhibitors generic	102 (1.9%)	-	-	-	102 (1.3%)
JAK inhibitors original	537 (9.9%)	78 (7.2%)	13 (1.8%)	33 (6.8%)	661 (8.6%)
TNF inhibitors biosimilar	72 (1.3%)+	16 (1.5%)++	61 (8.6%)+++	-	149 (1.9%)
TNF inhibitors original	3425 (62.9%)	578 (53.3%)	469 (66.4%)	345 (70.7%)	4817 (62.3%
Rituximab biosimilar	54 (1.0%)	8 (0.7%)	-	-	62 (0.8%)
Rituximab original	264 (4.8%)	82 (7.6%)	40 (5.7%)	63 (12.9%)	449 (5.8%)

\*n: number; IL: interleukin; JAK: janus kinase; TNF: tumor necrosis factor

t etanercept, adalimumab and infliximab biosimilars; tt infliximab biosimilar; ttt adalimumab and infliximab biosimilar

† ustekinumab, secukinumab, ixekizumab, risankisumab, guselkumab; ††ustekinumab, secukinumab, ixekizumab; ††† ustekinumab, secukinumab

#### Image 2:



#### Figure 1. Drug initiation in time in each BIOBADA registry

**Conclusion:** The availability of biologic DMARDs and small molecules differs in countries of LA. TNFi are the most frequently used. The inclusion of new drugs, biosimilars and generics have changed the pattern of drug initiation.

#### Disclosure of Interest: None Declared

Keywords: biologics, jak inhibitors, Spondyloarthritis



#### **Basic sciences**

#### PANLAR2024-1362

In Silico Design And Evaluation Of A Chimeric Pr3-Cistatin Protein With Potential Use As An Immunotherapeutic

#### **Recombinant Vaccine For The Prevention Of C-Anca Associated Vasculitis**

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

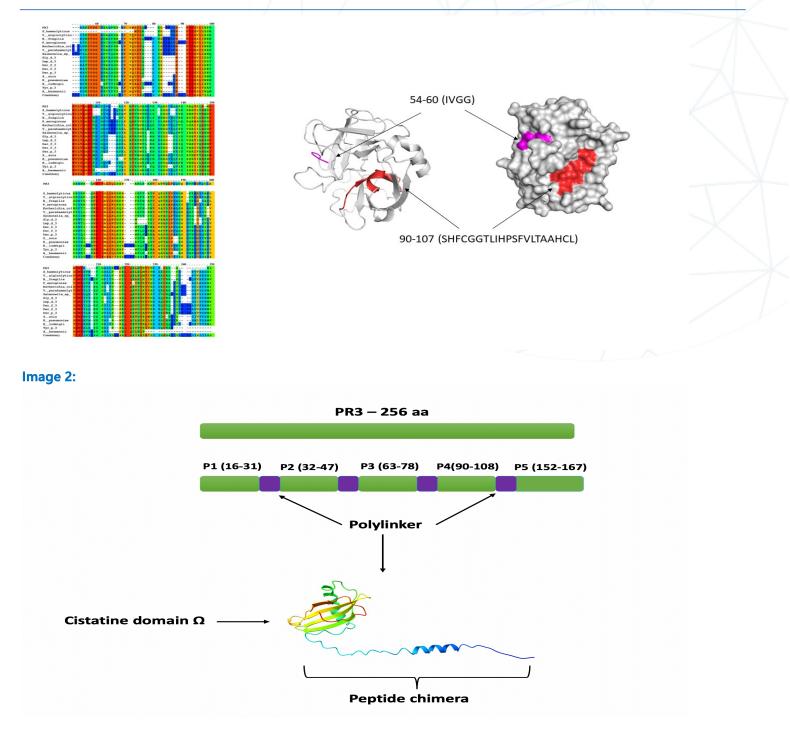
**Background/Objectives:** Human proteinase 3 (PR3) is an important autoantigen implicated in the genesis of c-ANCA associated vasculitis, since some individuals produce autoantibodies that target it and after immunotolerance losing, those antibodies can trigger strong inflammatory response against small blood vessels and vasculitis. Current treatments of vasculitis cause strong systemic immunosuppression increasing the risk of opportunistic infections and dead. Previously, we had found consistent in silico cross-reactivity between human PR3, mite and bacterial serine proteases, and identified some shared antigenic regions (Figure 1). Using those shared antigenic regions, here we designed a chimeric PR3-Cistatin protein with potential use as an immunotherapeutic/immunomodulatory recombinant vaccine for c-ANCA positive individuals with vasculitis.

**Methods:** The amino acid sequence of the PR3 autoantigen (Uniprot: P24158) was used to design non-overlapping peptides of 15 residues in length; those with the predicted ability to induce IL-10 by the ILeukin10Pred server were selected for the final design. The peptides were linked using the polylinker. GGGGSLVPRGSGGGGS to complete cystatin from Clonorchis sinensis (79923). The 3D structure of the chimera was predicted by homology using Swiss-model services (Figure 2). AllerTop was used to predict allergenicity capacity.

**Results:** leukin10pred identified four peptides with the property of inducing IL-10, covering positions 16-31, 32-47, 63-78, 152-167 and 90-108. Modeling of the chimera showed a characteristic folding of cystatin, while the peptides formed a domain made up of loops. Biochemical analyzes indicate that the chimera has high hydrophilicity with a molecular weight and isoelectric point of 29 KDa and 8.87, without allergenicity predicted.

#### Image 1:





**Conclusion:** The study proposes a novel immunotherapeutic approach for c-ANCA associated vasculitis by developing a chimeric PR3-Cistatin protein. This recombinant protein targets shared antigenic regions between human PR3, mite, and bacterial serine proteases, consisting of non-overlapping peptides predicted to induce IL-10, showcasing a characteristic folding of cystatin in its 3D structure. The high hydrophilicity observed in biochemical analyses adds to its



immunomodulatory potential. However, further experimental validation is necessary to characterize the immune response elicited in animal and toxic profile models.

**Reference 1:** Buendía E, Marlon M, Parra O, Sánchez M, Sánchez A, Sánchez J, et al. Human Proteinase 3, an important autoantigen of c-ANCA associated vasculitis, shares cross-reactive epitopes with serine protease allergens from mites: an in silico analysis. F1000Research. 2021;10.

**Reference 2:** Chavez Y, Garces J, Díaz R, Escobar M, Sanchez A, Buendía E, et al. Molecular mimicry among human proteinase 3 and bacterial antigens: implications for development of c-ANCA associated vasculitis. Oxford Open Immunol. 2022;3(1).

Disclosure of Interest: None Declared

Keywords: c-ANCA vasculitis, Human proteinase 3, Serine protease



#### **Spondyloarthritis**

#### PANLAR2024-1484

#### Could Erap Polymorphisms In Hla-B15 Or B27-Positive Patients With Spa Influence Cytokine Production?

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

**Background/Objectives:** The HLA-B27 allele has been associated with spondyloarthritis (SpA); however, in the Colombian population, it is present in only 40% of patients, and HLA-B15 is present in almost 25%. A polygenic mechanism has been proposed to explain the development of SpA. Endoplasmic reticulum aminopeptidase (ERAP) genes 1 and 2 have been implicated. Additionally, the cytokine profile is different in the SpA subtypes. These allowed two models of disease, one with HLA-B27 and axial presentation and a second with HLA-B15 and peripheral presentation. The aim was to determine the association between ERAP polymorphisms, cytokine profile, and patients with HLA-B27 or HLA-B15 positive SpA.

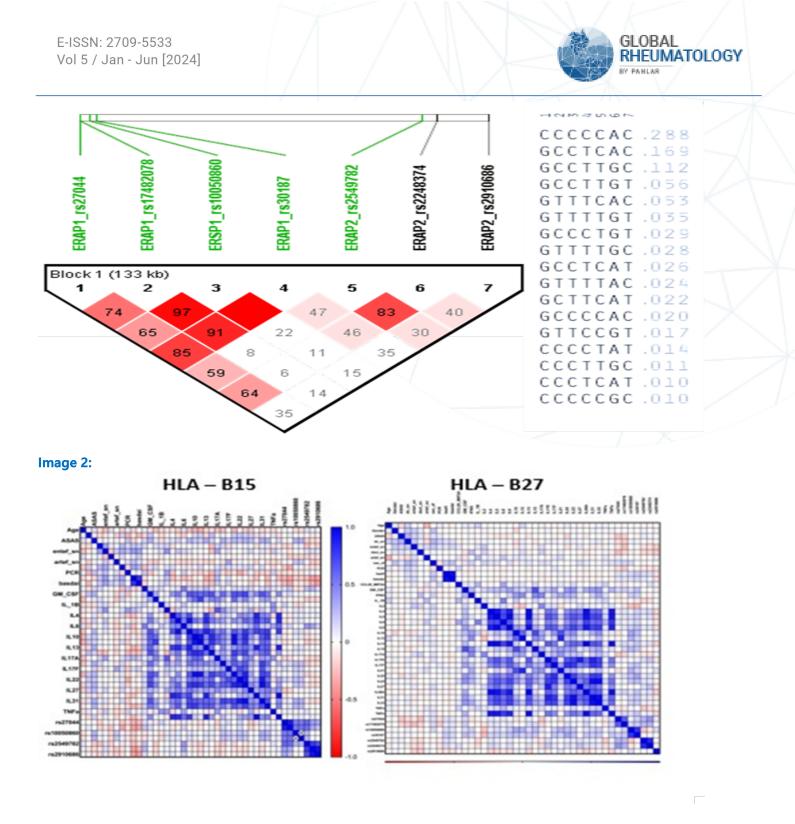
**Methods:** We evaluated 168 SpA patients according to ASAS criteria. HLA typing was performed using the PCR technique. The polymorphisms were determined by the RT-PCR technique using Roche® probes for ERAP1 rs27044, rs17482078, rs10050860, and rs30187. For ERAP2, the probes used were rs2910686, rs2248374 and rs2549782. Human Cytokine/Chemokine Magnetic Bead Panel kit from Millipore (Human Th17MAG-14 Px25K) (Merck) determined the cytokine serum concentration. All reagents were provided with the kit and were prepared according to the manufacturer's recommendations.

The allele and genotype frequencies polymorphisms were obtained by direct counting. In each group, the Hardy-Weinberg equilibrium was evaluated using the 2 test. The haplotypes were constructed and analyzed using Haploview v.4.2. Associations were assessed using odds ratio (OR). Stata v.17.0 program was used to analyze data.

**Results:** The frequency of HLA-B27 was 66%, and 34% of HLA-B15, 62.5% were men. The linkage disequilibrium map was obtained, where those of us who obtained 3 protection haplotypes and one risk haplotype were described in Figure 1.

The profiled HLA-B15 group were spinal pain, elderly, arthritis as first symptom in onset disease, more peripheral manifestations, polymorphism rs10050860, and rs30187, highest IL9, IL10, IL12, IL13, IL15, IL17f, IL21, IL22, IL23, IL28a, IL33, TNFβ, GM-CSF. The Profiled HLA-B27 were men, axial, lumbar pain, poor BASFI, BASDAI, polymorphism rs10050860 and rs30187, highest IL22, IL23, IL25, IL31, IL33 (Figure 2).

#### Image 1:



**Conclusion:** We found two different profiles of SpA presentation that could be determined by the HLA-B15 or B27 allele, ERAP inheritance patterns, and cytokine concentrations. Axial presentation is linked to HLA-B27, and peripheral presentation is linked to HLA-B15, both with differentiated cytokines.

**Disclosure of Interest:** None Declared **Keywords:** Colombia, Cytokines, Spondyloarthritis



#### **Pediatric Rheumatology**

PANLAR2024-1499

Gastrointestinal Manifestations And Complications In Children With Multi-System Inflammatory Syndrome (Mis-

#### C). Multicentric Study Of 16 Latin American Countries

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

**Background/Objectives:** MIS-C associated with COVID-19 infection is a post-infectious entity, characterized by systemic inflammatory manifestations, most frequent cardiovascular and gastrointestinal (GI), but the latter have been less described (as manifestation and complication). **Objective**: To describe the GI manifestations and the development of complications in children diagnosed with MIS-C.

**Methods:** Observational, ambispective study of 84 centers in 16 Latin American countries. Patients < 18 years of age, with a diagnosis of MIS-C (August 2020 to June 2022) were included. Demographic, GI manifestations and complications, laboratory and treatment variables were analyzed. **"Complication"** was defined as the worsening or development of new signs and symptoms that negatively affect the prognosis of a disease. **Statistical Analysis:** Descriptive, Chi2 and T Test. Multivariate. SPSS 19.0.

**Results:** 1,239 patients with MIS-C were included, 699 male (56%) with median age 6.5 years (IQR: 2.8-10.6). 1010 pts (82%) presented GI involvement more frequently: abdominal pain 805 pts (80%), vomiting 693 (68%), diarrhea 574 (57%) and abdominal distension 322 (32%). Initially 403 pts (40%) were diagnosed as acute gastroenteritis. 138 pts (14%) presented with acute abdomen: at the debut of SIM-C in 55 pts (5%) and during the evolution in 83 pts (8%), (more common in both: appendicitis and peritonitis). Abdominal ultrasound was performed in 502 pts (50%) and abdominal CT in 96 pts (10%), with altered images in 60% and 83% respectively (most common: mesenteric adenitis, free fluid in the abdominal cavity and vesicular hydrops). 65 pts (6%) required surgical intervention (39 exploratory laparoscopy). 901 pts (89%) were treated by MIS-C with IVGG and 740 pts (73%) IV steroids. Patients with GI involvement were older (7.2 vs 5.5 years p.0001), were previously healthy (87 vs 74% p.0001) and presented with shock (42 vs 24% p.0001). African American ethnicity was associated with greater GI involvement (OR: 2.6 95% CI: 1.1-6.1 p.028). **As a complication**, acute abdomen was observed in older patients (8.9 vs 6.6 years p.0001) and associated to shock (58 vs 36% p.0001). **Conclusion:** GI manifestations are frequent in MIS-C (82%), mainly mild forms. However, severe forms, with acute abdomen, may be the initial manifestation, or be present in the course of the disease, in older children and be associated with a more severe form of MIS-C with shock.

#### Disclosure of Interest: None Declared

Keywords: Gastrointestinal Manifestations, Multi-system Inflammatory Syndrome (Mis-c)



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

#### PANLAR2024-1542

#### Rheumatoid Arthritis: Clinical Characteristics Of Patients In Real-World Life Panlar'S Register.

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

**Background/Objectives:** Different treatments in rheumatoid arthritis (RA) changed the course of the disease. Objective: To compare the basal clinical and disease characteristics of Latin America patients with RA initiating a new treatment. **Methods:** Data from the real-world life PANLAR's register of consecutive patients diagnosed with RA from Dec 2021 to Dec 2023 were analyzed. Categorical variables were expressed as %. Tables of contingency were analyzed with  $\chi^2$  or Fisher test, continuous variables (median, IQR) (p<0.05 was considered significant).

**Results:** 1290 patients -86.8% females- were included. Anti CCP was positive in 63.3%, 72% and 76% while rheumatoid factor was present in 79.2%, 84.1% and 79.1%, in JAKi, bDMARD and cDMARD groups respectively. Joint erosions were significantly lower in cDMARD (37.6%) than bDMARDs (58%) and JAKi (51.4%). HAQ was significantly higher in patients initiating JAKi: 1 (0.63-1.25), and bDMARD: 1.125 (0.63-1.88), vs cDMARDs 0.8 (0.38-1.2). Concomitant glucocorticoids (GC) used was significantly lower in cDMARD (50.5%) group than bDMARD (69.3%) and JAKi (64.2%), while concomitant cDMARD used was higher in bDMARD patients than JAKi (p=0.007). Methotrexate was the most frequent cDMARD: 62.2%, 61.1% and 65.2% in each group respectively. Regarding failure to initial basal treatment, JAKi patients were higher failure rate to previous bDMARD (p=0.0006) and lower failure rate to previous JAKi (p=0.0014) than bDMARD patients. No differences in activity score (moderate to high) were found between JAKi and bDMARD patients.



#### Table 1: Clinical and disease characteristics in RA patients

	JAKi (n=532)	bDMARD (n=416)	cDMARD (n=342)
Concomitant GC, n % (95%Cl)	339/528, 64.2% (59.9-	284/410, 69.3% (64.5-	161/319, 50.5% (44.8-
	68.2)	73.7)	56.1)
Concomitant cDMARD, n % (95%CI)	393/531, 74% (70.1-77.7)	342/411, 83.2% (79.2- 86.7)	92/319, 28.8% (23.9- 34.1)
Methotrexate use, n % (95%CI)	242/389, 62.2% (57.2-67-	212/347, 61.1% (55.7-	60/269, 65.2% (17.4-
	1)	66.2)	27.7)
At least 1 cDMARD failure, n, %	507/528, 96% (93.9-97.5)	382/411, 92.9% (90.1-	76/319, 23.8% (19.2-
(95%Cl)		95.2)	28.8)
At least 1 bDMARD failure, n, %	304/531, 57.3% (52.9-	189/410, 46.1% (41.2-	5/320, 1.6% (0.6-3.6)
95%Cl)	61.5)	51.05)	
At least 1 JAKi failure, n, % (95%Cl)	42/531, 7.9% (5.76-10.5)	59/411, 14.4% (11.1-18.1)	3/319, 0.9% (0.2-2.7)

**Conclusion:** As basal characteristics cDMARD patients had significatively lower erosions, HAQ and GC use than the other groups probably because other treatments are second line or more.

Disclosure of Interest: None Declared

Keywords: Real world data, Registry, rheumatoid arthritis



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

#### PANLAR2024-1543

Safety In Different Treatment In Latin American Rheumatic Patients: Preliminary Data Of The Real World Panlar'S

#### Latin American Register.

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

**Background/Objectives:** Patients treated with cDMARD, bDMARD, tsDMARDs should be adequately screened and monitored for infection, cardiovascular disorders, thrombosis, malignancies.Objective: To evaluate safety of treatments in Latin American patients with inflammatory rheumatic diseases.

**Methods:** Data from the real-world life PANRED register of consecutive patients diagnosed with RA, PsA and axSpA from Dec 2021 to Dec 2023 were analyzed. Categorical variables are expressed as %. Tables of contingency were analyzed with  $\chi^2$  or Fisher test (p<0.05 was considered significant).

**Results:** 1520 patients were included, 440 had one year of follow-up. A total of 189 (12.4%) adverse events (AE) were recorded. 19 (1.25%) were considered serious (SAE) and 11 (0.7%) serious infections. JAKi patients had higher rate of any AE than cDMARD (p=0.0006) without differences compared to bDMARD. The frequency of serious infections and SAE were similar between groups, also the frequency of herpes zoster was similar. SAE/AE were similar between bDMARD and JAKi: pneumonia, respiratory tract infection, infectious enteritis, pericardial effusion, bone necrosis, and severe pain. No differences were found in malignancy, death or cardiovascular AE. Thromboembolic events/AE (DVT or PT) were lower in JAKi than bDMARD patients (p<0.0001).

Table 1: AE, SAE an AE of special interest in Latin American rheumatic patients



		/		
	Global	cDMARDs	bDMARDs	JAKi
	(1520)	(393)	(559)	(568)
Any AE, n%(95%CI)	189, 12.4% (10.8- 14.2)	30, 7.6% (5.2-10.7)	74, 13.2% (10.5-16.3)	85, 14.9%(12.1-18.1)
SAE, n%(95%CI)	19, 1.2% (0.75-1.9)	1/30, 3.3% (0.08- 17)	8/74, 10.8% (4.8-20.2)	10/85, 11.7%(5.8- 20.6)
Serious infection AE, n%(95%CI)	11, 0.7% (0.36-1.2)	-	5/8, 62.5% (24.5-91.4)	6/10, 60%(26.2- 87.8)
AE of special interest, n%(95%Cl)	43, 2.8% (2-3.7)	3/30, 10% (2.1- 26.5)	26/74, 35.1% (24.4- 47.1)	14/85, 16.5%(9,3- 26.1)
-Herpes Zoster	13, 0.8% (0.4-1.4)	3/30, 10% (2.1- 26.5)	3/74, 4% (0.8-11.4)	7/85, 8.2%(3.4-16.2)
Ever-MACE (AMI + Stroke)	-	-	-	-
-DVT or PT	26, 1.7% (1.1-2.5)	-	22/74, 29.7% (19.6- 41.5)	4/85, 4.7%(1.3%- 11.6%)
Death	4, 0.2% (0.07-0.6)	-	1/ 559, 0.2% (0.004- 0.9)	3/568, 0.5%(0.1-1.5)

Major adverse cardiovascular events: MACE; acute myocardial infarction: AMI; Adverse event: AE; serious adverse event: SAEs deep venous thrombosis: DVT; pulmonary thromboembolism: PT.



**Conclusion:** In this real-world life register JAK inhibitors demonstrated safety at the studied time. Nevertheless, patients treated should be adequately screened and monitored for each condition.

Disclosure of Interest: None Declared

Keywords: Real world data, Registry, rheumatic diseases