2024 ANNUAL MEETING NEWSLETTER

GRAPPA
Group for Research and Assessment of Psoriasis and Psoriatic Arthritis

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July 11-13

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MESSAGE FROM THE OUTGOING CO-PRESIDENTS

The appointment of both a rheumatologist and a dermatologist as co-presidents of GRAPPA underscores our commitment to achieving cross-specialty excellence in clinical care, research, and education concerning psoriatic disease. GRAPPA is a dynamic and expanding organization, and it has been an honor to lead it over the past three years. We have focused on structural reorganization, striving to develop a transparent and efficient organization with increased global representation, effectively harnessing the energy of our members.

Our efforts have been largely successful. Through our committees, research and educational initiatives have flourished, and we are particularly grateful for the contributions from both Y-GRAPPA and patient research partners. Additionally, these accomplishments would not have been possible without the continuous support from our industry partners. We extend our special thanks to Judi Pickell and the GRAPPA team for their unwavering support.

We wish Drs. Artie Kavanaugh and Joseph Merola every success as the new co-presidents and hope they derive as much satisfaction from their roles as we have from ours.

April Armstrong and Oliver FitzGerald

MESSAGE FROM THE NEW CO-PRESIDENTS

Dear GRAPPA Colleagues,

We are honored to take the reins as co-presidents of GRAPPA. Thanks to the hard work of past leadership, especially our recent co-presidents, Dr. Armstrong and Dr. FitzGerald, and the dedicated efforts of numerous GRAPPA members, the organization has grown stronger and more impactful every year. Our goal is to maintain this momentum and continue GRAPPA's legacy as the premier interdisciplinary, international organization focused on Psoriatic Disease.

For this, we need your help! Let's use this transition period to explore how we can make GRAPPA even better. We welcome your suggestions on improving all aspects of GRAPPA, including our meetings, website, global outreach, research agenda and projects, and our involvement with patient research partners and Y-GRAPPA members. Your ideas and suggestions are invaluable to us!

Please send us your ideas via admin@grappanetwork.org.

Best regards,
Artie and Joe

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Predicting response to treatment in those receiving biologic therapy in PsA: linking clinical, imaging and molecular markers to better stratify patients.

PsA affects males and females in equal proportions, yet there are sex differences in clinical manifestations and treatment outcomes. The biological mechanisms driving these sex-specific differences are unknown.

Dr. Steven Dang, Canada, presented key highlights from his untargeted proteomic study measuring over 7,000 serum proteins in 100 patients with active PsA and 50 healthy controls:

- Males with PsA had significantly more unique differentially expressed proteins (741) compared to females (31).
- Sex-specific pathways were related to immune cell function (e.g., NETosis, phagocytosis), cytokine signalling, and intracellular signalling (e.g., Rho GTPase signalling).
- Unsupervised multivariable prediction models based on protein signatures accurately predicted sex-specific disease status (PsA male vs. control male and PsA female vs. control female), with the area under the curve ranging from 0.843 – 0.99
- Variable importance analysis from random forest models identified key sex-specific contributors: Leukotriene A-4 hydrolase for females and IL-36a, NEK7, and PIK3CA/PIK3R1 for males.

Takeaways:

- The study identified several sex-specific pathways and serum proteins, offering potential targets for future biomarker studies and drug therapies.
- Sex should be considered a biological variable in PsA and biomarker research.

Is toe dactylitis in PsA related to trauma caused by plantar shear stress? A Case control pilot study.

It has been hypothesized that trauma may lead to the development of dactylitis in PsA due to the “deep” Koebner phenomenon. Dactylitis is most often seen in the feet, and in particular the 4th toe. **Prof. Philip Helliwell, UK,** and colleagues have previously found no differences in plantar pressure in patients with dactylitis.

This study aimed to develop a novel plantar shear platform and to measure plantar shear in control subjects, and subjects with PsA. A multiarray plantar shear platform was developed and shear stresses measured in 12 control subjects, 12 subjects with PsA and no history of toe dactylitis, 17 subjects with a history of toe dactylitis and 6 subjects with active toe dactylitis.

Initial analysis found that shear stresses did not differ between the groups, but the analysis is ongoing with more detailed examination of the two shear axes to come.

Potential biomarkers for characterization of psoriasis patients at different risk levels to develop Psoriatic Arthritis

Ongoing research by Köhm, Behrens et al. suggests that lipidomics can effectively distinguish between individuals with PsA and healthy controls. **Dr. Caroline Gross, Germany,** presented findings from a pilot study which extended data analysis to clinical characteristics, ultrasound, near infrared fluorescence optical imaging (NIR-FOI) and lipidomics of patients with psoriasis at high risk of progressing to PsA.

Main findings:

- 9 out of 25 patients exhibited pathological power doppler activity on ultrasound and were categorized as subclinical PsA.
- FOI showed no significant difference between cohorts.

Lipidomics:

- A mixed subpopulation with elevated sphingolipid and endocannabinoid levels was found with no clear separation between the original lipidomics cohorts (Figure 1).
- By adding samples from previous studies, the following was found (Figure 2):
  - Elevated levels of ceramides in PsA compared to control, Cer d18:1/18:0 also compared to psoriasis.

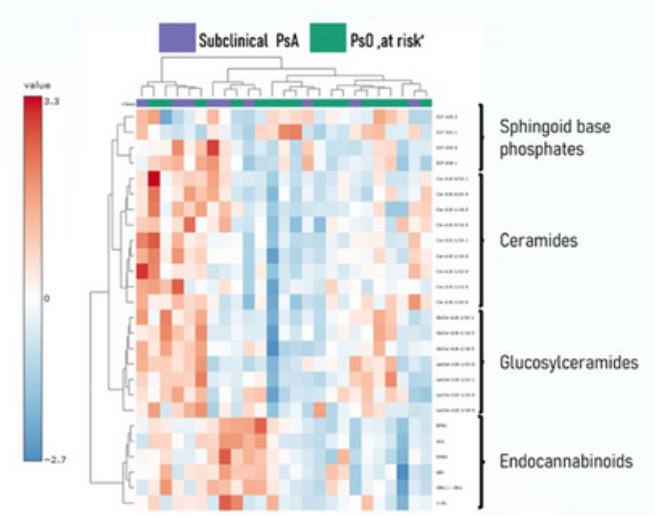


Figure 1: Heatmap with ward clustering, euclidean distance measure

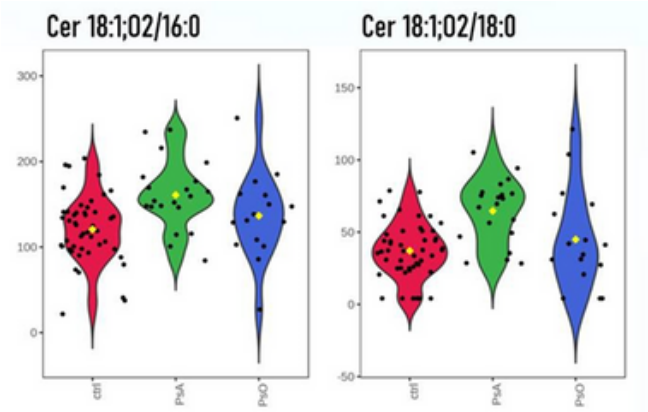


Figure 2: Analysis of CER levels in PsO vs. PsA and healthy controls

Biologic/targeted synthetic disease-modifying antirheumatic drugs (b/tsDMARDs) inhibit radiographic progression and preserve bone mass in PsA, but their long-term effects on joint damage and bone loss are unclear.

Dr. David Simon, Germany, presented a study which used data from a prospective PsA cohort to assess damage progression, bone loss, the impact of b/tsDMARDs, and disease activity associations. It included patients from University Hospital Erlangen cohorts, with high-resolution CT scans evaluating damage progression and bone mineral density.

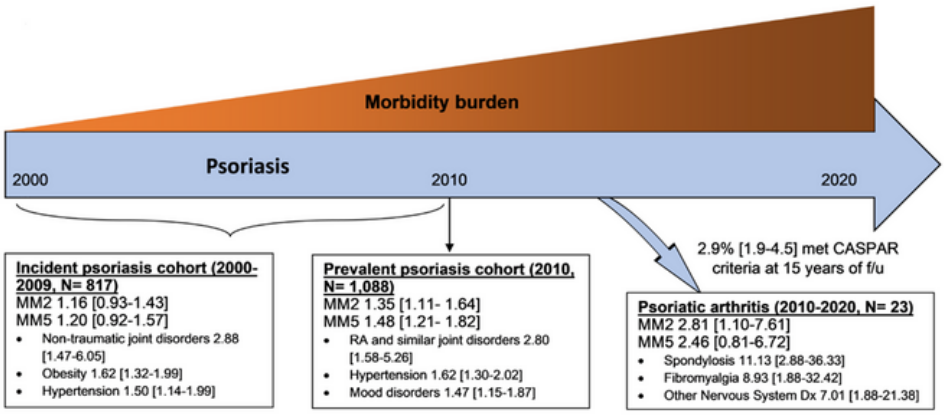
Among 467 patients (151 PsA, 55 psoriasis, 261 RA), bone quality deteriorated over time in PsA and RA but not in psoriasis. The bone loss in patients with PsA correlated with disease activity, and damage progression was linked to worsening disability.

These findings emphasize the importance of targeted treatment strategies to mitigate long-term joint damage and functional decline in patients with PsA, underscoring the potential of precision medicine in improving patient outcomes.

PILOT RESEARCH GRANTS

Dr. Paras Karmacharya, USA, presented the initial findings of his pilot project *Multimorbidity in psoriasis as a risk factor for PsA:*

- This population-based cohort study showed a higher prevalence of multimorbidity in the prevalent but not incident cohort of psoriasis compared with the general population, suggesting that patients with psoriasis may experience accelerated development of multimorbidity.
- No difference in multimorbidity was noted based on the severity of psoriasis, underscoring the need for comprehensive management of morbidities in all patients with psoriasis, regardless of psoriasis severity.
- Multimorbidity (two or more morbidities) at psoriasis incidence (specifically nonspecific musculoskeletal and psychiatric disorders) was associated with a higher risk of PsA, highlighting the importance of monitoring multimorbid psoriasis patients for the potential development of PsA.



Schema of multimorbidity in the incident and prevalent psoriasis cohorts and its association with the incidence of PsA. MM2= 2+ morbidities defined as multimorbidity, MM5= 5+ morbidities defined as substantial multimorbidity

2024 RECIPIENTS

$25,000 PILOT RESEARCH GRANT

Basic Science

AKIHIRO NAKAMURA

Mentor: Vinod Chandran

Queen's University, Canada

HIF1A in Neutrophils: A Potential Crucial Factor for Psoriatic Arthritis through a Positive Feedback Loop with IL-23

Clinical Science

LYN FERGUSON

Mentors: Stefan Siebert & Naveed Sattar

NHS Greater Glasgow and Clyde and University of Glasgow, UK

Advancing the case for timely weight loss trials in psoriatic disease by better understanding differences in body composition

Translational Science

ANAÏS MAKOS

Mentors: Oksana Kehoe, Jan Herman Kuiper, & Roshan Amarasena

Keele University, UK

Cytokines carried by plasma EVs as potential biomarkers predicting response to TNFi in PsA

$35,000 PILOT RESEARCH GRANT
Combined PsD

GIOVANNI ADAMI

Mentors: Paolo Gisondi & Maurizio Rossini

University of Verona, Italy

Bone Properties and Biomechanics in Patients with Psoriatic Disease: A Prospective Study with High-Resolution Peripheral Quantitative Computed Tomography (HRpQCT)

THANK YOU TO THE REVIEWERS!

Omar Alzayat, USA, presented an update on his project *TRPM4 Function in Western Diet Induced Psoriasis via IL-23 Mediated Inflammation.*

TRPM4 is a cation channel which amongst other functions plays a role in keratinocyte differentiation. Gain of function (GoF) mutations in the TRPM4 gene causes progressive symmetric erythrokeratodermia with clinical features similar to psoriasis.

GoF TRPM4 mice have normal skin if unprovoked but exaggerated psoriasiform dermatitis when fed a western diet. They also display greater severity of inflammation in both the imiquimod psoriasis model and the DNFB-induced contact hypersensitivity model.

Bone marrow derived dendritic cells (BMDCs) from GoF TRPM4 mice show greater inflammatory reactivity and migration ability compared to their wild type counterparts. The TRPM4 inhibitor NBA (Compound 6) decreases BMDC migration and blocks inflammatory stimulation in primary keratinocyte cells.

Because of the exaggerated inflammation seen in both contact dermatitis and psoriasis models, they postulate that TRPM4 may be a regulator in many types of skin inflammation and a target for treatment not only for psoriasiform disease, but possibly other skin diseases.

The Stockholm Psoriasis Cohort (SPC) was an inception cohort study in which 721 patients were examined at first onset of psoriatic skin lesions, and at five and ten years thereafter. The examinations were conducted by dermatologists, and patients who had joint complaints were examined by a rheumatologist. Patients completed an extensive questionnaire. Blood was drawn and has been analysed to obtain data on genetic variants, systemic inflammation, and lipid subfractions.

Dr. Axel Svedbom, Sweden, presented how data from the enrolment examination was used to develop one white-box and one black-box algorithm predicting PsA status at the ten-year examination. They evaluated the performance of the algorithms using split sample validation.

The white-box algorithm comprised five variables (current arthralgia, arthralgia in the last twelve months, enthesitis, dactylitis, and HS-CRP) and had a c-statistic of 0.82, indicating good discrimination. The black-box algorithm comprised 88 variables and had a c-statistic of 0.88, indicating excellent discrimination.

The results of this study can be used to identify patients at high risk of PsA to facilitate early intervention, improving long-term outcomes.

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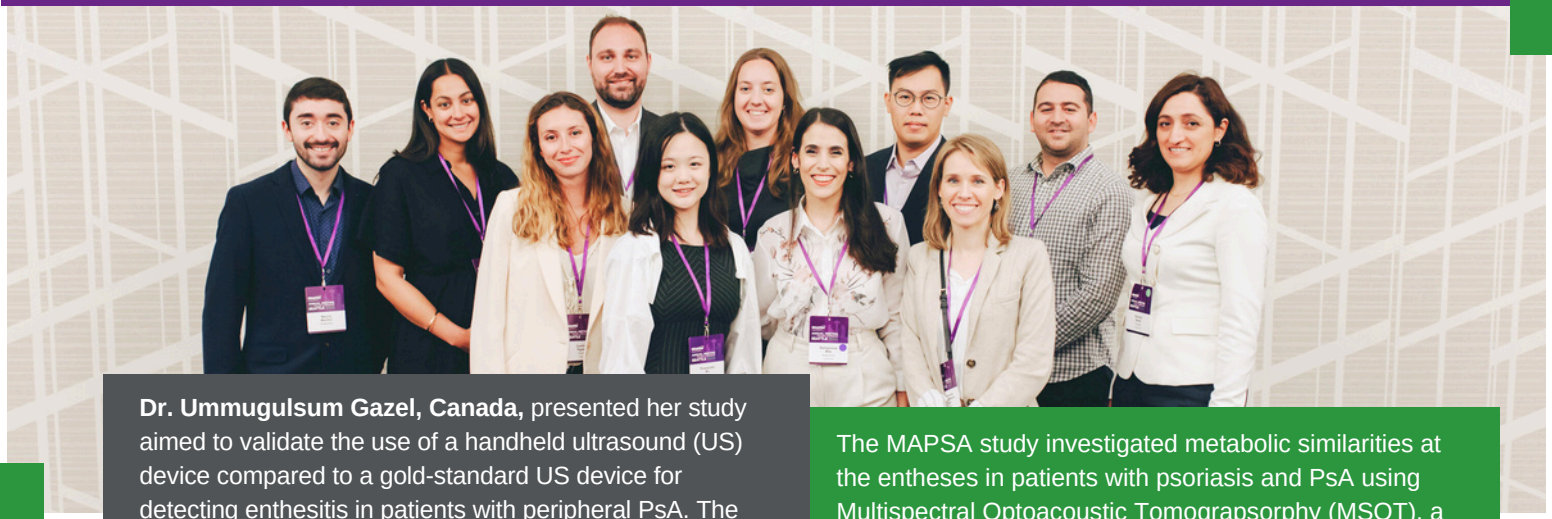
TRAINEE SYMPOSIUM



Dr. Ummugulsum Gazel, Canada, presented her study aimed to validate the use of a handheld ultrasound (US) device compared to a gold-standard US device for detecting enthesitis in patients with peripheral PsA. The interim analysis involved 10 patients, each undergoing consecutive US examinations using the handheld Clarius HD3 L15 scanner and the GE LogicE9 gold-standard device. The study focused on evaluating entheses, including the patellar ligament, plantar facia, supraspinatus, triceps, common extensor, quadriceps and Achilles tendons, for elementary lesions of enthesitis: hypoechogenicity, thickening, erosion, enthesophyte formation, calcification, and Doppler signals.

The agreement between the handheld and gold-standard devices was substantial for detecting enthesophytes and erosions, moderate for thickening, Doppler signals, and hypoechogenicity, but only slight for calcifications. Despite the variation in detecting specific lesions, the overall consistency between the two devices was very strong for inflammation, chronicity, and total enthesitis scores (ICC > 0.93).

These interim results suggest that handheld US devices could be valuable in rheumatology practice, potentially increasing accessibility and reducing costs for patient care. Further testing is encouraged to validate these findings for broader clinical use.

The MAPSA study investigated metabolic similarities at the entheses in patients with psoriasis and PsA using Multispectral Optoacoustic Tomograpsorphy (MSOT), a novel imaging technique. The study compared metabolic profiles of entheses in patients with psoriasis and PsA with healthy controls (HC) to explore early metabolic changes in enthesitis development. Ninety participants (30 psoriasis, 30 PsA, 30 HC) underwent clinical, US and MSOT assessments of six entheses.

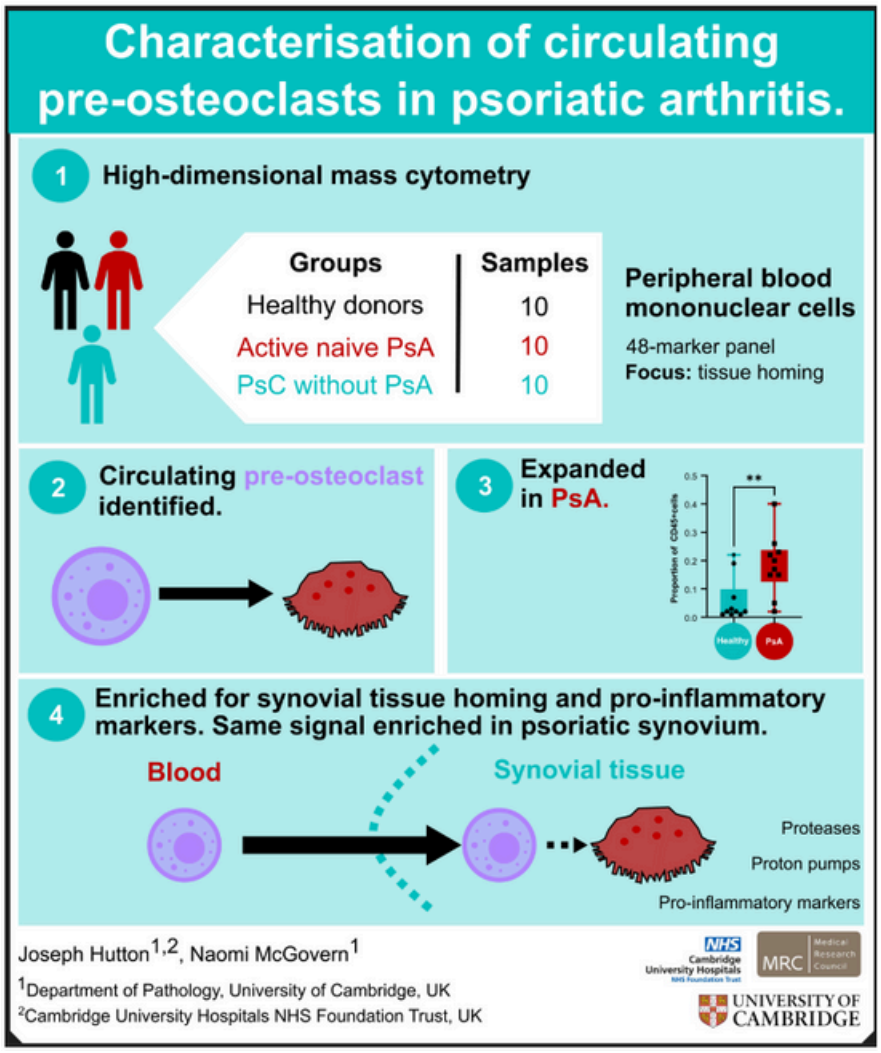
Dr. Filippo Fagni, Germany, presented results showing that patients with both psoriasis and PsA exhibit increased oxygenated hemoglobin and oxygen saturation levels, and decreased collagen signals at the entheses compared to HC, with more pronounced changes in PsA. Additionally, tender entheses showed lower collagen and higher lipid levels. US-detected erosions and enthesophytes correlated with significant differences in oxygen saturation and lipid signals.

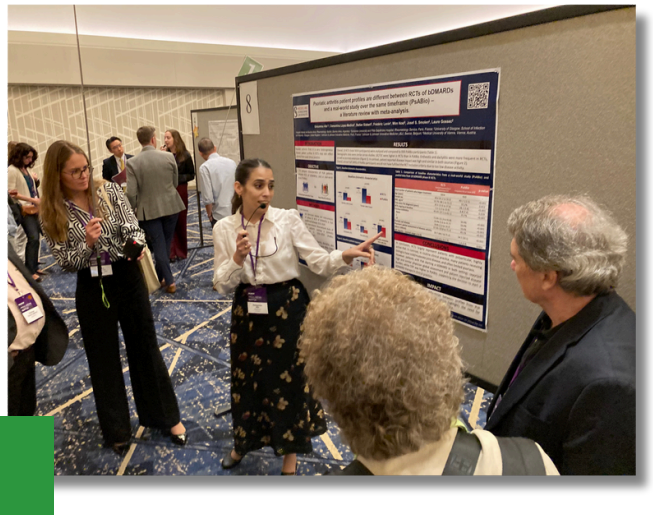
The study suggests that psoriasis and PsA share a similar metabolic profile at the entheses, which is exacerbated in the presence of inflammation, implying the existence of a common immuno-metabolic spectrum in psoriatic disease.

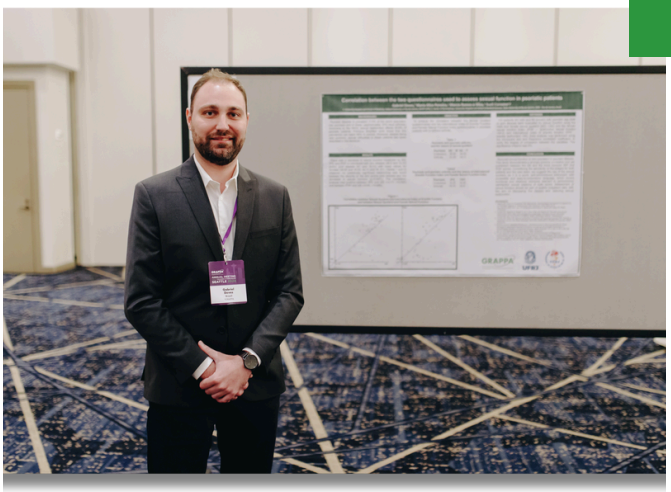
View all 2024 abstract posters here.

THE FOLLOWING ORAL PRESENTERS PROVIDED INFOGRAPHIC SUMMARIES:

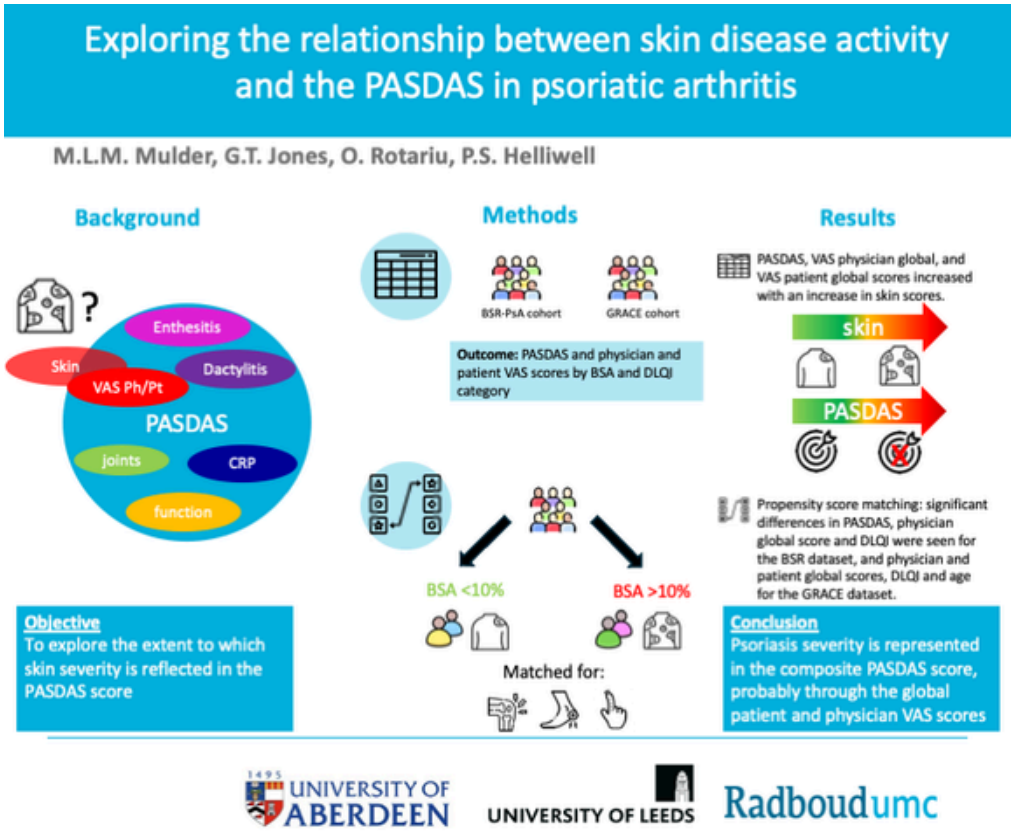
Dr. Joseph Hutton, UK



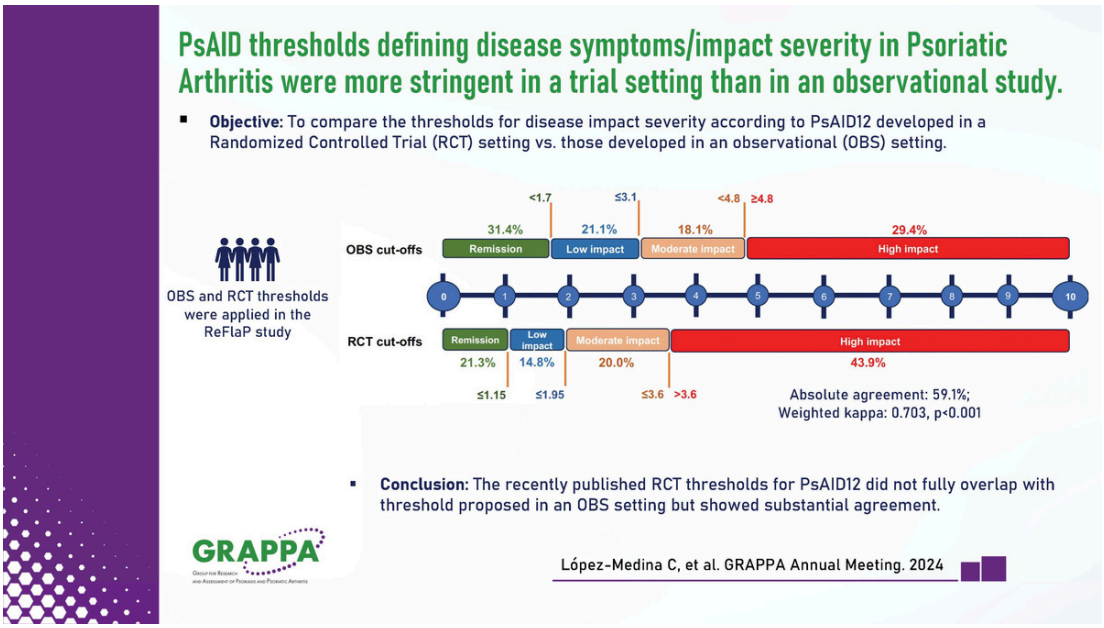




Dr. Michelle Mulder, The Netherlands



Dr. Clementina Lopez-Medina, France



THANK YOU TO THE REVIEWERS!

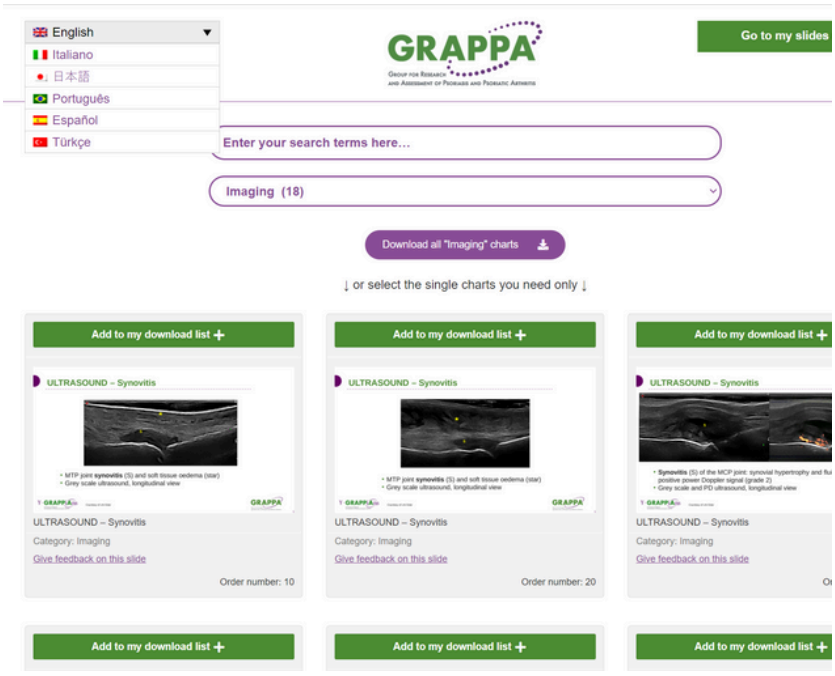
GRAPPA SLIDE LIBRARY UPDATE

Initiated in March 2022 and concluded in June 2023, the GRAPPA Slide Library was launched at the 2023 GRAPPA Annual Meeting and Trainee Symposium. **Dr. Gizem Ayan, Turkey,** presented work on the GRAPPA Slide Library in the past year:

- Implementation of an analytics program to understand user preferences.
- Revision of eight slides based on feedback.
- Translation of the library to increase global accessibility, with five languages (Brazilian Portuguese, Italian, Japanese, Spanish, Turkish) already available.

Future plans include more translations and regular updates, incorporating contributions from upcoming meetings to ensure the library's continued relevance and improvement.

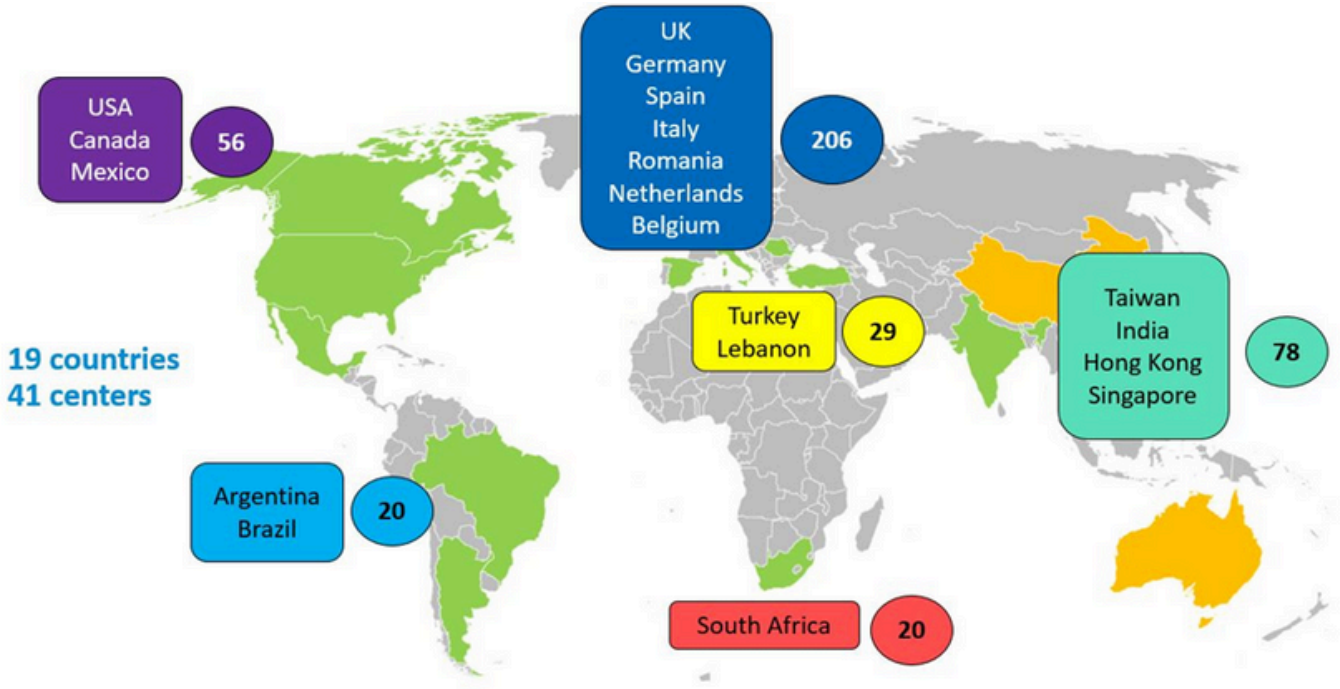
SCAN ME!



HOW TO COUNT THE JOINTS OF THE FOOT – A GRAPPA SURVEY

In the complete 76/78 joint count the individual joints of the toes are assessed. In the 66/68 joint count this is not the case but just how the joints of the toes should be assessed is unclear. An original report advised to count the proximal interphalangeal and distal interphalangeal joints as ‘one’ (method A) but the OMERACT endorsed 66/68 joint count advised counting only the proximal interphalangeal joints of the toes (method B).

This GRAPPA survey, presented by **Prof. Philip Helliwell, UK,** was designed to understand the current practice of GRAPPA members who undertake clinical trials. The results showed that the majority of GRAPPA members use method B thus ignoring any disease activity in the distal interphalangeal joints of the toes.



THE AXIAL INVOLVEMENT IN PSORIATIC ARTHRITIS (AXIS) STUDY

The AXIS study is a prospective cross-sectional study conducted under the auspices of ASAS and GRAPPA. The aim of the study is to develop a unified nomenclature for axial involvement in PsA, allowing for the definition of a homogeneous subgroup of patients for research.

On behalf of the study group, **Prof. Denis Poddubnyy, Canada,** announced the successful completion of enrolment, with 409 individuals included from 41 centers across 19 countries. The figure shows the status of enrollment of all participating countries / regions.

After initial clinical, laboratory, and imaging evaluations — including locally interpreted radiographs and MRIs of the sacroiliac joints and spine— local investigators determined axial involvement in 153 participants (37.4%). Then, local investigators re-evaluated their patients after reviewing all data, including central image review reports, to determine if their presentations were indicative of axial involvement in PsA, and provided a ***"Final Investigator Assessment".*** Based on this final assessment, there were a total of 112 participants (27.4%) with axial involvement.

The next steps involve working on definition / classification criteria, and data will be analyzed accordingly.

Thanks again to all participating centers researchers for their collaboration!

ASAS Assessment of SpondyloArthritis international Society

AXIS

GRAPPA Group for Research and Assessment of Psoriasis and Psoriatic Arthritis

D2T PsA PROJECT

Dr. Fabian Proft, Germany, gave an update on the "D2T" GRAPPA project aiming to establish a universal definition for Complex-to-Manage (C2M) and Difficult-to-Treat (D2T) PsA. This definition is crucial for guiding clinicians in managing patients who continue to exhibit disease activity despite multiple therapies, including biologics and advanced DMARDs. Real-world evidence indicates that 10-30% of patients with PsA fall into this category, underscoring the need for further research and tailored treatments.

To inform the development of D2T-PsA criteria, GRAPPA conducted an international survey of healthcare professionals and found that 82.5% of respondents supported distinguishing between C2M and D2T PsA. Additionally, 90.5% agreed that objective signs of inflammation are essential for the D2T classification. The next steps involve a Delphi process and a formal vote to finalize these definitions in 2025.

BIOMARKER PROJECT

Prof. Vinod Chandran, Canada, presented an update on behalf of the GRAPPA Biomarker Team. Over the past year, the team brainstormed priority areas for biomarker research. The goal is to identify biomarkers present at baseline in patients with PsA that may predict which patients are likely to (1) respond to a specific therapy, and (2) experience radiographic damage. The team worked with industry partners to collect patient samples from ongoing clinical trials, and two studies are currently in progress:

1.The GRAPPA-Atturos-Pfizer project focused on identifying biomarkers for treatment response. The study involved a targeted evaluation of a panel of approximately 200 existing candidate biomarkers from the OPAL:BROADEN and BEYOND trials. A number of novel serum protein biomarkers were discovered and the manuscript is currently being prepared for publication.

2.The second project focused on identifying biomarkers for radiographic damage. The team worked with Eli Lilly to analyze samples from the SPIRIT-P1 trial. A panel of biomarkers was identified and work is underway to replicate the findings in an observational cohort based in Toronto, Canada.

HIPPOCRATES CONSORTIUM ADVANCES PSORIATIC ARTHRITIS RESEARCH

The HIPPOCRATES consortium, funded by the Innovative Medicines Initiative (IMI), aims to improve early identification and outcomes in PsA. With a €22.5 million budget, the project involves 27 partners, including academic institutions, pharmaceutical companies, and patient organizations.

Prof. Oliver Fitzgerald, Ireland, presented key achievements on behalf of the consortium. These include a data-sharing agreement and the upload of clinical and molecular data for over 2000 PsA patients. Significant progress has been made in developing diagnostic tests, identifying risk factors, understanding joint damage, and advancing precision medicine. Ongoing studies focus on molecular markers, imaging techniques, and treatment responses, with further promising developments expected in the next two years.

DUET – DIAGNOSTIC ULTRASOUND ENTHESITIS TOOL

The DUET study aims to develop a new sonographic enthesitis scoring system to improve early diagnosis of PsA. The study, led by **Dr. Lihi Eder, Canada, Prof. Sibel Aydin, Canada,** and **Prof. Gurjit Kaeley, USA,** started as a GRAPPA project in March 2021 and completed enrollment at 17 sites from 8 countries in March 2023. The study included a prospective collection of data from rheumatologist assessments, patient surveys, and US scanning of 16 entheseal sites. All US scans were scored for inflammatory and structural entheseal lesions by 3 central sonographers.

The study enrolled a total of 213 patients with PsA, 100 patients with psoriasis alone, and 106 non-psoriatic controls. Initial scoring of the scans was completed in July 2023, with consensus scoring involving an additional adjudicator completed in May 2024. The initial approach to the statistical analysis involved a data-driven approach, but due to its inherent complexity, a step-wise approach was used.

Preliminary results presented at the GRAPPA 2024 annual meeting showed that findings by Power Doppler was relatively uncommon, but generally higher in patients with PsA. Some of the entheseal sites appear to be more discriminative than others. Erosions were generally rare across most sites but predominantly found in PsA cases.

The team is currently working on the analysis, aiming to create a tool involving a combination of sonographic lesions and entheseal sites that is discriminative enough to be used in the clinic. They will also explore contextual factors, particularly age, that will have a significant effect on the sonographic scoring system.

COMPOSITION

COMPOSITION - EARLY RECOGNITION OF PSA STUDY

Prof. Denis Poddubnyy, Canada, introduced a new project, the COMPOSITION study, that aims to evaluate a novel approach for PsA detection by combining patient questionnaires with physician evaluations. It is a prospective multicenter study that will compare the diagnostic performance of a physician-based screening and referral strategy against a patient questionnaire–based approach in identifying patients with a high likelihood of having PsA among those with psoriasis. The questionnaire-based screening will include the PEST, whereas the physician-based evaluation will include a standardized musculoskeletal assessment performed by a dermatologist, including evaluation for the presence of peripheral arthritis, enthesitis, dactylitis, and axial symptoms. Dermatologists will be blinded to PEST outcomes. PEST-positive and/or physician-positive patients will be referred to a rheumatologist for further evaluation. Rheumatologists will conduct a thorough evaluation, including collection of demographic data, clinical history, family history, and patient-reported outcomes; they will also conduct a physical examination focusing on MSK manifestations. The primary outcome will be the proportion of patients diagnosed with PsA using the different approaches.

The proposed study represents an important effort to refine PsA diagnosis by combining patient questionnaires with dermatologist-delivered MSK evaluations. Through rigorous assessment and collaboration, this research aims to improve the screening process, ultimately benefiting individuals with psoriasis by offering quicker, more accurate PsA detection and management.

TREATMENT RECOMMENDATIONS UPDATE

Prof. Enrique Soriano, Argentina, presented a summary on the progress made with the 2022 publication as well as a proposed timeline for future updates on behalf of the GRAPPA treatment recommendations committee. The 2022 treatment recommendations and the supporting literature reviews are all now published. They have also been translated into Spanish and Portuguese.

Ongoing development of the current treatment recommendations remains part of the core mission of GRAPPA. A new steering committee has been appointed to further develop the recommendations. In addition to Prof. Soriano, it is made up of Prof. Arthur Kavanaugh, USA, Prof. Laura Coates, UK, Prof. Ennio Lubrano, Italy, Prof. Katy Leung, Singapore, Dr. Suzanne Grieb, USA (PPI), and Dr. Lourdes Perez Chada, USA.

In an effort to recruit additional GRAPPA members to support this project, a survey was distributed and more than 150 responses were collected. Co-leaders of each treatment domain have been appointed, and group members were assigned to each domain based on their preference. The eight treatment domains are: peripheral arthritis, skin, nail, axial, enthesitis, dactylitis, related conditions, and comorbidities. Each domain includes a steering committee liaison, domain leaders, a Y-GRAPPA member, and a Patient Research Partner. This project is expected to be completed by late 2025, and will include the development of PICO questions, literate searches and data synthesis, followed by drafting and publishing the treatment recommendations.

AxPsA PILOT STUDY

Prof. Philip Mease, USA, presented an update on the GRAPPA CRN project, known as the Axial Psoriatic Arthritis Molecular and Clinical Characterization study, an independent investigator study sponsored by Janssen. The primary goal of the project is to identify liquid and/or tissue biomarkers to help distinguish the presence of axial involvement in PsA.

The study plans to enroll 40 biologic-naïve patients with PsA with disease duration less than 10 years, half with and half without axial involvement; collect clinical data; and send blood, stool, skin, and synovial biopsy samples to the University of Toronto (Prof. Vinod Chandran) as the central repository. Imaging, radiography, and MRI of sacroiliac joints and spine will be read centrally. Extensive biomarker analysis is planned.

The Seattle site has completed enrollment of 5 patients. Interim molecular analysis is planned for synovial samples from this initial subset of patients. Six other global sites are working to obtain contractual and regulatory approvals before they can begin recruiting patients.

SAGE-PsA

SAGE-PSA – SEX AND GENDER BASED ANALYSIS OF THE EFFECTIVENESS OF ADVANCED THERAPIES IN PSORIATIC ARTHRITIS

SAGE-PsA is an international, multicenter study supported by GRAPPA through multiple pharmaceutical industry–supported grants. **Dr. Lihi Eder, Canada,** presented the study which aims to understand how sex and gender influence response to advanced therapies in PsA; specifically, it aims to determine what biological and sociocultural mechanisms explain the differences in treatment response between men and women with PsA.

SAGE-PsA was launched in March 2023 and includes 36 sites worldwide. 27 sites have been fully activated, and 188 patients (out of 540) have been enrolled to date. The team plans to activate all participating sites by the end of 2024 and complete study enrollment by 2025.

In addition, **Prof. Philip Mease, USA,** is leading a qualitative study (SAGE-Qual) using focus groups in Toronto, Cleveland and Seattle. The aims of the study are to characterize the influence of sex and gender on patient experience and treatment outcomes, and to identify patterned barriers and facilitators to management of PsA by sex/gender. A medical anthropologist will interview participants and identify common- and sex-specific themes. SAGE-PsA should improve our understanding of the effects of sex and gender on PsA, which will contribute to more personalized approaches to caring for people living with PsA.

GROUP REPORTS
YOUNG GRAPPA

Leadership Transition: Leadership rotation occurred at the Annual Meeting, with **Dr. André Ribeiro, Brazil**, stepping in as Chair of Y-GRAPPA, **Dr. Fabian Proft, Germany,** moving to Past Chair, and **Dr. Gizem Ayan, Turkey**, announced as Chair Elect.

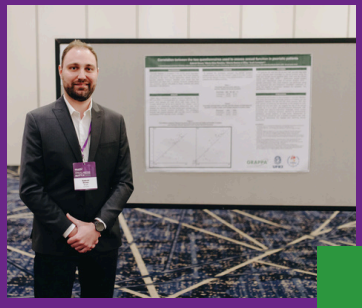
Reorganization of Subcommittees

- Committees were reorganized and repurposed, with new leaders detailed in Figure 1.
- Committees will be reorganized to have a core group of active members with clear objectives, responsibilities and regular progress meetings, with additional Y-GRAPPA members joining projects via email calls open by the Membership Group.
- Emphasis will be placed on social media for increasing GRAPPA's visibility as a society.

Figure 1. Y-GRAPPA Leadership

DO YOU WANT TO JOIN A Y-GRAPPA SUBCOMMITTEE?

APPLY NOW



Research Initiatives
The Research Committee will instigate a new project to engage members, focusing on survey-based research. This will be the first research project championed by Y-GRAPPA.

Enhanced Collaboration
Strengthening efforts to ensure active Y-GRAPPA representation in all GRAPPA projects and improve communication between Y-GRAPPA and senior GRAPPA members.

Growth and Diversity
Young-GRAPPA (Y-GRAPPA) continues to expand, now encompassing 152 members, with a significant global presence, balanced gender distribution, and 70:30 rheumatology:dermatology specialty representation.

Join Y-GRAPPA
If you wish to join Y-GRAPPA, scan the QR code or click below

Join Young-GRAPPA!

LEARN MORE HERE

PRP UPDATE

We are pleased to announce a new logo for the PRP network, representing the great work we do together to advance the mission of GRAPPA.

As presented at the Annual Meeting, the PRP Network is looking to expand and increase our diversity. **Patients affected by psoriatic disease who are passionate about making a difference in the lives of individuals are welcome.** We invite you to discuss this with potential candidates, and if interested and willing to consent to having their name shared, we will follow up with the application process. The PRP Network is looking to find patients that round out the team and provide diversity of thought and experience to reflect the global goals of GRAPPA.

PRP Network 2024 Recruiting Criteria

1.Preference to patients from Australasia, Africa, Eastern Europe, and Latin America. Non-white persons preferred. English language fluency required.

2.Any age with a preference for those with disease experience as an adolescent (under 18 years of age)

3.Desire to improve research outcomes and ultimately patient health outcomes and preference for some engagement in local or regional groups.

4.Ability to commit to volunteer time each month and to attend the annual meeting each July (4 days). The meeting locations alternate between North America, Europe, and South America.

Please forward contact information of potential PRP members to Deboarh Warren (deborah@grappanetwork.org) who will send the prospective members a letter and screening questions.

GRAPPA PRP NETWORK
Group for Research and Assessment of Psoriasis and Psoriatic Arthritis
Patient Research Partner network

GRAPPA-OMERACT

Dr. Katy Leung, Singapore, and **Tommy Kok Annfeldt, Denmark,** gave an update on the assessment of composite outcome measures for PsA on behalf of the GRAPPA-OMERACT (Outcome Measures in Rheumatology) PsA working group.

They presented the progress of a systematic literature review on the psychometric properties of candidate composite outcome measures using the OMERACT filter 2.2 **(Figure 1).** The candidates included Minimal Disease Activity (MDA), Disease Activity in PsA (DAPSA), American College of Rheumatology (ACR) response criteria, Psoriatic Arthritis Disease Activity Score (PASDAS), Composite Psoriatic Disease Activity Index (CPDAI), and the 3 or 4 Visual Analogue Scale (VAS). A Delphi exercise regarding domain match and feasibility was also presented for these composite outcome measures. Future steps include a Delphi exercise for patient-research partners to assess domain match and feasibility, and ultimately obtain endorsement from the GRAPPA community.

While the OMERACT filter evaluates the qualitative discrimination of instruments, the quantitative comparison in RCTs remains unclear. A new meta-epidemiological study will determine which of the selected composite outcome measures has the greatest odds of responding to experimental intervention in PsA RCTs. The standardized mean difference will be used to analyze and compare these measures. This novel approach will provide a comprehensive evaluation of the comparative effectiveness of these diverse outcome measures.

	Results from WG Delphi (Await PRP)		Results from systematic literature review					
Composites for PsA	**Truth**	**Feasibility**	**Truth**	**Discrimination**				
	Domain match	Feasibility	Construct validity	Test-retest reliability	Long'l construct validity	Clinical trial discriminat ion	Thresholds of meaning	**(Tentative) Overall**
ACR20/50/70	No consensus	GREEN	AMBER	NA	NA	NA	NA	**NA**
MDA	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN	AMBER	**AMBER**
CPDAI	No consensus (or AMBER)	No consensus (or AMBER for RCT)	AMBER	AMBER	GREEN	GREEN	AMBER	**NA**
DAPSA	GREEN	GREEN	GREEN	AMBER	GREEN	GREEN	AMBER	**AMBER**
PASDAS	GREEN	GREEN (RCT)	GREEN	GREEN	GREEN	GREEN	GREEN	**GREEN** (RCT)
3VAS, 4VAS	No consensus (or AMBER)	GREEN	AMBER	NA	AMBER	NA	NA	**NA**

Figure 1. Domain match and feasibility for the composite outcome measures.

INDUSTRY COLLABORATIVE RESEARCH NETWORK

The Industry Collaborative Research Network Meeting was moderated by the GRAPPA Research Committee Co-Chairs: **Professors Wilson Liao, USA, Vinod Chandran, Canada, and Kurt de Vlam, Belgium.** The keynote speaker was **Dr. Signe Holm Nielsen, Denmark,** Scientific Director and Head of Dermatology at Nordic Bioscience.

Dr. Holm Nielsen presented on *Utilizing Soluble Biomarkers in Drug Development for Diagnostic, Prognostic, and Predictive Purposes - From Discovery to Clinical Trials in Psoriatic Disease*. She reviewed important requirements for using a soluble biomarker in psoriatic disease, and highlighted that a successful soluble biomarker needs 1) Scientific excellence; 2) Technical excellence; and 3) Regulatory excellence (FDA/EMA approval).

Biomarkers can support clinical trials in several ways:
1) Diagnostics: to detect the disease.
2) Pharmacodynamics: to provide fast read - outs and show biological response.
3) Prognostics: for patient selection and monitoring of drug efficacy.
4) Predictive models: which can show if your drug has an effect on structural damage.

Each biomarker can serve just one or several purposes, for instance it can be used both in diagnostics and prognostics. The use of biomarkers can have benefits, such as:

- Saving time and money – treatments become available faster
- Fewer patients in clinical trials – including those that will benefit from treatment
- Benchmark against other treatments – which treatment works best and how patients are benefitting
- Objective measure – can act as a drug development filter assessing its efficacy
- Fast decision making – can shorten the duration of a trial, less adverse events, efficacy

Finally, multiple examples of soluble collagen degradation biomarkers, such as C1M and C4M, were presented as well as their correlation with disease activity and structural damage in conditions such as PsA and RA.

GROUP REPORTS
EDUCATION COMMITTEE

RECENT AND EMERGING GRAPPA EDUCATIONAL INITIATIVES

- Slide Library (Y-GRAPPians) – added 5 translations (Italian, Spanish, Japanese, Turkish, and Portuguese)
- Inside GRAPPA Podcast
- Collaboration with SPARTAN and ASAS
- Collaboration with NPF, IPC, IFPA
- Collaboration with pharma educational initiatives
- Collaboration with CME company Paradigm to create The Figuring Out Psoriatic Disease Learning Center
- eLearn with GRAPPA: Effective Clinical Communication for Improved Outcomes
- New Education Committee Co-chairs: Elaine Husni, USA, Kay Leung, Singapore, and Luis Puig, Spain
- Added Advanced Practice Provider (APP) member to Education Committee and 3 additional derm members.
- Education Committee webpage developed

EDUCATIONAL SYMPOSIA (STAND ALONE MEETINGS) FOR RHEUMATOLOGISTS AND DERMATOLOGISTS AROUND THE WORLD, VIRTUAL AND IN PERSON (RECENT AND UPCOMING):

- Cartagena, Colombia
- Dubai, UAE
- Cairo, Egypt
- UK Workshop and Webinars
- Milan, Italy
- Sardinia, Italy
- Curitiba, Brazil
- GRAPPA Swiss Event
- GRAPPA Workshop – IRACON, India
- PANLAR-GRAPPA Symposium
- APLAR-GRAPPA Symposium
- SPARTAN-GRAPPA-ASAS Symposium
- SPARTAN-GRAPPA Symposium collaboration
- Sri Lanka GRAPPA Workshop
- Bangladesh GRAPPA Workshop

IDEOM Workgroup Meeting

The International Dermatology Outcome Measures (IDEOM) is a non-profit organization dedicated to advancing outcome measurements in dermatology. During a meeting adjacent to the 2024 GRAPPA Annual Meeting, IDEOM's **Psoriatic Disease workgroup** presented updates on their ongoing efforts.

Prof. Joseph Merola, USA, provided an update on the validation of the IDEOM MSK-Q questionnaire, a patient-reported tool designed to capture the musculoskeletal manifestations of psoriatic disease in patients with or without PsA.

Prof. Alice Gottlieb, USA, presented ongoing research aimed at improving PsA screening. The integration of the Psoriasis Epidemiology Screening Tool (PEST) and Psoriatic Arthritis Impact of Disease (PsAID) questionnaires into the Epic electronic health record system aims to enable detection of early stages of PsA disease. Preliminary results support the efficacy of these tools for PsA screening and clinical decision-making.

Prof. Merola, and **Prof. Vibeke Strand, USA,** presented developments in the connective tissue disease workgroup, in partnership with OMERACT, focusing on unmet needs in cutaneous lupus erythematosus.

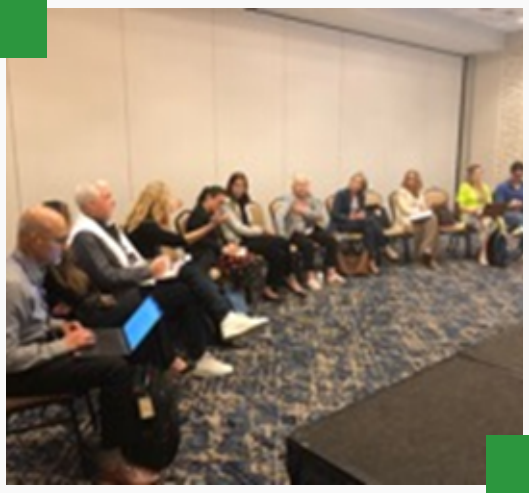
Prof. April Armstrong, USA, provided updates on the development and validation of DermSat-7 and DermSat-11, treatment satisfaction questionnaires designed for use in clinical trials and real-world studies to measure patient satisfaction with their treatments and disease states.

Updates regarding the status of each of the described projects will be provided during the 2025 IDEOM Annual Meeting.

GRAPPA
Group for Research and Assessment of Psoriasis and Psoriatic Arthritis

WORLD CAFÉ SESSION

In the forthcoming five to ten years, what specific areas of unmet need should GRAPPA prioritize and how should we do so?



This question was discussed in a world café session which took place in 10 rooms to facilitate meaningful and cooperative dialogue. Each room accommodated approximately 20 participants and had an assigned leader, a moderator and a Y-GRAPPA scribe. **Prof. Sam Hwang, USA,** and **Dr. Jessica Walsh, USA,** collated the notes and below is the summary of key points.

1 PATIENT CARE AND TEACHING:

- Develop screening tools (including biomarkers) to evaluate for transition from psoriasis to PsA.
- Educate community providers and patients to prevent delays in diagnosis; ensure patients are aware of risk factors.
- Evaluate factors that contribute to difficult to treat PsA disease.
- Provide training tools for advanced practice providers.
- Optimize electronic medical records and harmonize shared data by inclusion of AI.
- Develop up to date treatment guidelines and ensure that guidelines are consistent between specialty groups.
- Develop treatment guides for resource-constrained countries and disseminate evidence about lifestyle and diet.

2 RESEARCH:

- Conduct research involving diverse populations with inclusion of precision medicine.
- Continue search for biomarkers for optimizing management of patients.
- Conduct trials of combination therapy.
- Recruit more young investigators (including PhD researchers) and develop mentorship programs.
- Partner with industry for funding when federal grants are insufficient.
- Design metrics/indices that separate joint injury from widespread pain.

3 ADMINISTRATION:

- Define GRAPPA's unique role and communicate our vision.
- Think beyond skin and joint – move to gastrointestinal disease and beyond. Also, consider renaming psoriatic disease.
- Increase stakeholder engagement.
- Increase dermatology presence.
- Ensure global representation and diversity through fellowships and mentorship programs.
- Improve shared collaborative research and partnering with other organizations.
- Communicate with policy makers regarding awareness of workforce issues and advances in care.

AI IN PSORIATIC DISEASE

Prof. April Armstrong, US, and **Prof. Denis Poddubnyy, Canada,** explored the topic of *Challenges and Opportunities of Artificial Intelligence (AI) In Psoriatic Diseases*, from dermatological and rheumatological perspectives, respectively.

AI is increasingly utilized in various clinical scenarios, including diagnostic support, risk prediction, data analysis, and standardization of outcome prediction. Specifically, AI can enhance the diagnostic process for PsA and psoriasis by analyzing clinical and imaging data. Machine learning tools like PredictAI have shown high specificity in identifying undiagnosed PsA within psoriasis cohorts; AI models can predict the risk of PsA development in patients with psoriasis by utilizing sequential diagnostic and prescription data. A 6-month PsA risk prediction model demonstrated significant sensitivity and specificity. AI can also analyze complex datasets including cellular biomarkers, gene expression data, and metabolomics. MRI scans and other imaging data fed into AI networks achieved high accuracy in differentiating between various forms of arthritis and assessing disease activity. Additionally, AI can facilitate the standardization of outcome assessments such as PASI and NAPSI scores. Predictive models using AI can forecast treatment responses and changes in disease activity, aiding in personalized patient management.

With these advantages in mind, the integration of AI into routine clinical practice holds promise for improving diagnostic accuracy, predicting disease progression, and optimizing treatment strategies in psoriatic diseases.

INFLAMMATORY MEMORY IN PSO

Prof. Liv Eidsmo, Sweden, highlighted the complex mechanisms of inflammatory memory in psoriatic disease and the challenges in treating psoriasis and PsA effectively. Inflammatory disease memory involves a broad array of cells including keratinocytes, T cells, Langerhans cells, and fibroblasts. This cellular memory leads to relapses in both PsA and psoriasis. Epigenetic imprinting in keratinocyte stem cells contributes to "trained inflammatory alertness," perpetuating the disease state and facilitating recurrence. Understanding these mechanisms is crucial for developing new therapeutic strategies.

Tissue-Resident Memory (TRM) cells play a significant role in maintaining skin health. However, eradicating TRM cells alone is insufficient to prevent disease recurrence. T cells, particularly newly recruited ones, receive inflammatory signals from epigenetically primed tissues, lowering the threshold for recurrent inflammation in psoriatic disease. Addressing both resident and newly recruited T cells is essential for effective treatment.

More studies are needed to understand the interplay between joint and skin inflammation in psoriasis and PsA. This includes the roles of cellular and molecular pathways in sustaining inflammatory memory.

KEYNOTE: CHALLENGES AND OPPORTUNITIES IN PSORIATIC DISEASE

In this session **Prof. Iain McInnes, UK,** and **Prof. Nicole Ward, USA,** delivered fascinating talks on the current challenges and opportunities in psoriatic disease research, from the perspectives of rheumatology and dermatology, respectively. **Dr. Jeffrey Stark, US,** then joined them for an interactive Q&A session, providing insightful inputs from the industry perspective.

The discussion centered on major challenges in the clinical care and research of psoriatic disease, identifying two primary issues:

1. Current approaches to psoriatic disease management (e.g., GRAPPA and EULAR guidelines) are based on population-level datasets, which may not be directly applicable to individual patients.
2. A lack of understanding of the discrete immune regulatory networks across different tissue sites in psoriatic disease.

To address these challenges, the speakers proposed the following solutions and opportunities:

1. Integrating key stakeholders and different clinical specialties (e.g., rheumatology, dermatology, gastroenterology) that manage overlapping inflammatory diseases, into a central discipline ("IMIDology").
2. Increasing the application of AI-based methodologies across all areas of psoriatic disease investigation and management.
3. Utilizing novel techniques including single-cell sequencing and spatial transcriptional approaches to characterize psoriatic disease "endotypes" and tailor treatment selection (i.e., precision medicine).
4. Investigating the mechanisms underlying the interactions between cardiovascular-metabolic diseases, obesity, mental health disorders, and psoriatic disease.
5. Generating a molecular map of psoriatic disease.

During the Q&A session, examples of AI applications were discussed, including:

1. Elucidating key non-coding genes involved in psoriatic disease pathophysiology.
2. Using AlphaFold to characterize the structure of proteins involved in disease pathophysiology.

Overall, the session highlighted the need for an interdisciplinary approach to psoriatic disease; the importance of considering interactions with common disease co-morbidities; and how advanced technologies could be harnessed to address current challenges in psoriatic disease research and management. Altogether, these developments could eventually facilitate the routine implementation of personalized treatment approaches into clinical practice, leading to increased treatment efficacy, and ultimately improved patient outcomes.

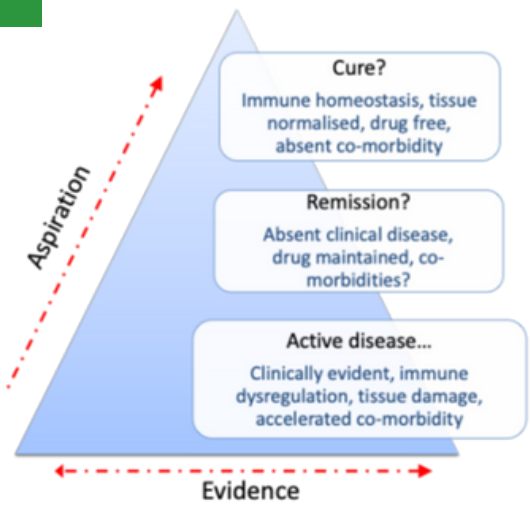


Figure 1. Critical challenges through 2030 for psoriatic disease-towards "molecular state". Figure extracted from the session: Challenges and opportunities in Psoriatic Disease, presented by McInnes IB at the 2024 Annual GRAPPA meeting held in Seattle, USA

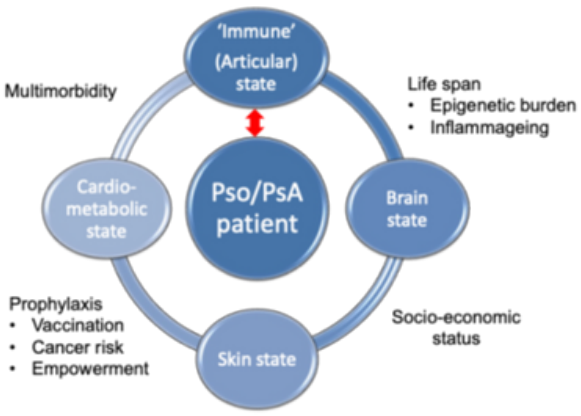


Figure 2. Multitargets involved in the treatment of psoriasis. Figure extracted from the session: Challenges and opportunities in Psoriatic Disease, presented by McInnes IB at the 2024 Annual GRAPPA meeting held in Seattle, USA

MORNING CONCURRENT WORKSHOPS

WHAT YOU ALWAYS WANTED TO KNOW ABOUT SCIENCE BUT WERE AFRAID TO ASK

Prof. Nicole Ward, USA, and **Prof. Stephen Pennington, Ireland,** co-chaired this interactive morning workshop.

Prof. Pennington reminded participants that the scientific method is a systematic approach which starts by making an observation and that defining the question to be addressed is an extremely important part of scientific enquiry.

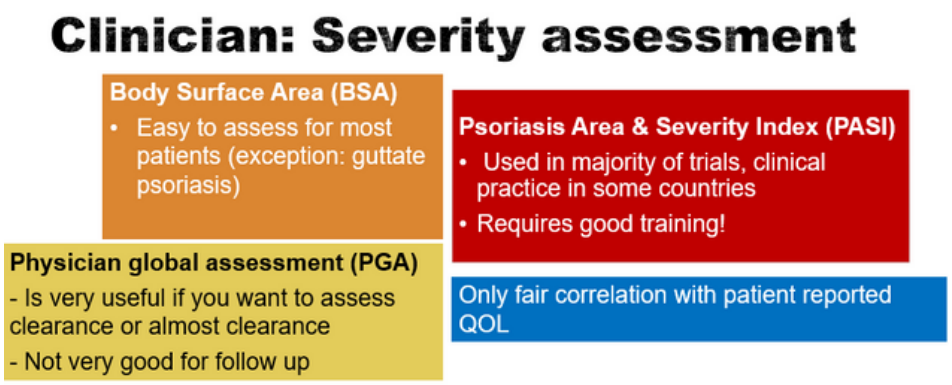
Researchers need to apply critical thinking to all aspects of their research - this is particularly important with large data and AI. Participants discussed possibilities and disadvantages of AI, including that AI is based on already published data, and many AI platforms put the questions, with any linked data, into the public domain.

Prof. Ward then used slides from her Keynote presentation to explain what spatial and single cell sequencing are, and how big data can be presented. She described how to read heatmaps, UMAPs and Circos plots and stressed that transcriptomic data needs to be validated.

Prof. Pennington finished the session off by discussing some of the elephants in the “scientific room” including plagiarism, data manipulation and that AI is now being used to readily trace these in published manuscripts, and can be reported in online blogs such as Retraction Watch.

PSORIASIS OUTCOMES FOR THE RHEUMATOLOGIST (OR NON-DERMATOLOGIST)

This workshop was a practical, interactive and lighthearted overview of diagnosing cutaneous psoriatic disease and assessing severity. **Prof. Kristina Callis Duffin, USA,** introduced the session with a case illustrating the pitfalls of misdiagnosis and the importance of working disease severity assessment into clinical practice.



Co-presented by **Dr. Manuel Franco, Colombia,** and **Dr. Juan Raul Castro-Ayarza, Colombia,** Part 1 focused on the importance of making a correct diagnosis. Following a quick overview of skin and nail psoriasis, an interactive quiz (“is it psoriasis or is it not?”), helped the audience to differentiate between psoriasis and other conditions including tinea, seborrheic dermatitis, eczema, pityriasis rubra pilaris, syphilis and cutaneous lymphoma.

Part 2 was co-presented by Dr. Castro-Ayarza and Prof. Duffin and focused on the assessment of psoriasis severity. A brief review of physician-reported endpoints including body surface area (BSA), Physician Global Assessment (PGA) and the Psoriasis Area and Severity Index (PASI) was provided, including a review of the pros, cons, and nuances surrounding each measure. The importance of training for conducting PASI, using absolute endpoints (e.g. PASI<3, PGA 0/1) and the challenges of implementing patient-reported outcomes in clinical practice were discussed.

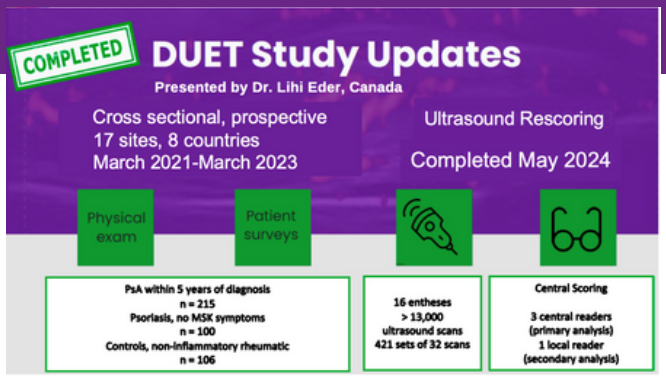
Advice for non-dermatologists: Work as a team. If you treat a patient with psoriasis as a non-dermatologist, find your best dermatology friend.

MORNING CONCURRENT WORKSHOPS

INNOVATIONS IN EDUCATION WORKSHOP

The landscape of medical education is evolving, with a focus on innovative techniques to enhance learning and engagement. Experts explored new paradigms in education in a morning workshop. Moderated by **Prof. Ashish Mathew, India,** and **Prof. Philip Mease, USA,** with insights from **Dr. Elaine Husni, USA,** and **Prof. Iain McInnes, UK,** the workshop emphasized setting clear learning objectives and integrating AI in education.

Key discussions included defining effective learning objectives, leveraging AI for more efficient teaching, and employing techniques to enhance engagement, such as the KNOW-FEEL-DO principle. Examples were provided, offering insights into effective educational frameworks. By embracing these advancements, medical educators can significantly improve the learning experience, ultimately leading to better clinical competence and patient care outcomes.



ULTRASOUND WORKSHOP

Moderated by **Prof. Gurjit Kaeley, USA,** with **Mr. Arnon Katz, Israel,** representing patient-research partners, the Ultrasound Workshop featured discussions on ongoing projects:

DUET Updates: **Dr. Lihi Eder, Canada,** presented updates on the Diagnostic Ultrasound Enthesitis Tool (DUET) Study, which aims to develop a sonographic score for diagnosing enthesitis in PsA, distinguishing it from non-PsA (see p13). Preliminary results were shared, highlighting the completion of recruitment and central scoring consensus. The presentation emphasized the challenges in developing this score due to the existence of non-specific entheseal changes often associated with contextual factors. Future directions for analyses were outlined with the aim to complete the analysis by the end of 2024.

Definition of Inflammatory Enthesitis: **Dr. Andre Ribeiro, Brazil,** introduced a DUET sub-study aimed at defining inflammatory enthesitis at the single enthesis level in PsA. Ninety ultrasound scans showing varying degrees of enthesitis severity were classified by ten DUET investigators as either inflammatory or non-inflammatory, using a certainty scale from -10 (definitely not) to +10 (definitely yes), along with open-text feedback explaining their scores. Preliminary results emphasized the need to combine multiple elementary lesions for diagnosis, as no single factor alone could confirm inflammatory enthesitis. This quantitative analysis will be complemented by a qualitative analysis to better understand the reasoning behind each score.

Small Joints Systematic Review: **Prof. Sibel Aydin, Canada,** presented partial results of an ongoing systematic review assessing the prevalence and definitions of synovitis, erosions, flexor mechanism lesions, extensor mechanism lesions, small entheses lesions, and subcutaneous tissue lesions in psoriatic disease.

MORNING CONCURRENT WORKSHOPS

EYE TO EYE: DIAGNOSIS AND MANAGEMENT OF EYE CONDITIONS IN PSORIATIC DISEASE

Prof. Thellea K. Leveque, USA, led this workshop, focusing on dry eye disease and uveitis which both are more common in patients with psoriatic disease.

- Evaluation of the red eye is tough without a slit lamp.
- Dry eye disease is common but does not require urgent treatment.
- Uveitis is still rare overall but requires prompt treatment.
- Urgent ophthalmology referral for unilateral RSVP: Redness, light Sensitivity, decreased Vision, Pain.
- If unsure, start with preservative free artificial tears and follow very closely.

Pearls on treatment and co-management of ocular involvement:

- Many patients with unilateral recurrent anterior uveitis can be managed with topical therapy.
- Consider systemic treatment for frequent, severe, sight threatening, or local steroid contraindication.
  - TNFi adalimumab and infliximab have the best data on uveitis efficacy.
  - There is some literature to suggest that patients taking the TNFi etanercept may have higher rates of anterior uveitis, so it is generally avoided in patients with existing uveitis.
  - Mixed data on sekukinumab, additional studies are pending.

MRI WORKSHOP

In the MRI workshop, **Prof. Mikkel Østergaard, Denmark,** and **Prof. Walter Maksymowych, Canada,** delved into the crucial role of MRI in evaluating both peripheral and axial musculoskeletal manifestations of PsA. The session included interactive case studies to demonstrate practical applications of MRI.

Key Takeaways:

- The comprehensive MRI approach is particularly useful for PsA due to its diverse disease manifestations.
- MRI facilitates the visualization of both axial and peripheral manifestations, enabling the detection of inflammatory and structural lesions and providing an overall patient assessment.
- Clinical trials have utilized MRI of the hands and feet, typically with contrast enhancement, to evaluate and monitor peripheral PsA, employing the OMERACT PsAMRIS scoring system for joint manifestations. The HEMRIS system has been used to evaluate heel enthesitis.
- For axial PsA, the ASAS MRI working group has developed a standardized terminology for describing lesions in axial spondyloarthritis, promoting global consistency in evaluations.
- The SPARCC scoring system assesses inflammatory lesions in the spine, focusing on disco vertebral units. In contrast, the Canada-Denmark (CANDEN) scoring system offers a more comprehensive anatomical evaluation of inflammatory and structural lesions in different spine segments and posterolateral elements.
- Emerging whole-body MRI techniques are promising in clinical trials, demonstrating the ability to differentiate between active treatment effects and placebo groups. The validated OMERACT WIPE scoring system allows the assessment of peripheral joints and entheses in the entire body.

MANAGING MSK SYMPTOMS IN PSORIASIS PATIENTS: WHO SHOULD BE IN THE DRIVER SEAT?

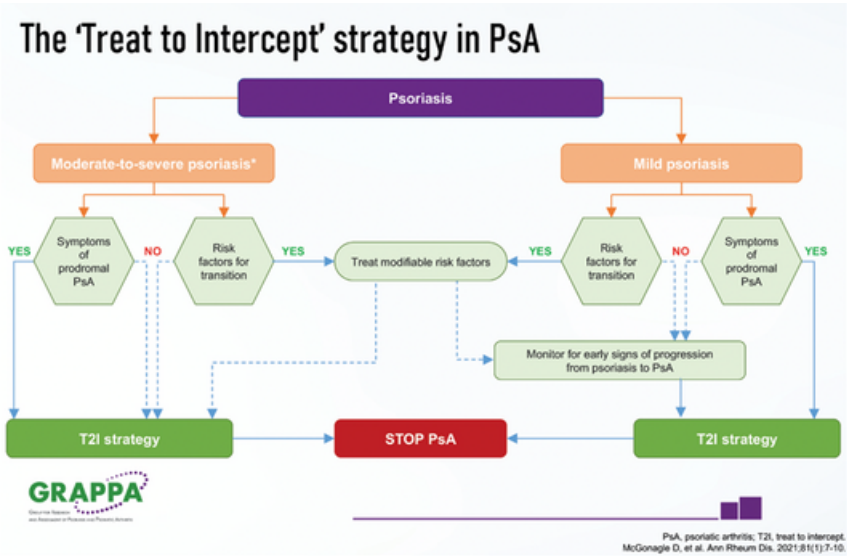
This session discussed whether dermatologists or rheumatologists should lead the recognition and management of MSK symptoms in patients with psoriasis.

From the rheumatologist's perspective, **Dr. Fabian Proft, Germany,** presented the advantages of rheumatologists managing MSK symptoms:

- Rheumatologists specialize in identifying whether MSK symptoms have an inflammatory or non-inflammatory origin, avoiding overdiagnosis and overtreatment.
- They have expertise in interpreting imaging tests to identify the source of MSK pain and early signs of damage, enabling appropriate treatment decisions.
- Through appropriate treatment early, rheumatologists can prevent irreversible damage.
- As specialists in internal medicine, rheumatologists can manage relevant comorbidities like hypertension and cardiovascular disease.

Dr. Laura Savage, UK, argued for the Dermatologists to be in the driver's seat, especially for early MSK symptoms:

- Dermatologists often see patients first, given that 70% of patients with PsA have antecedent psoriasis.
- Dermatologists can identify cutaneous signs that increase a patient's risk of PsA, allowing for mindful treatment choices.
- Patients at risk of transitioning to PsA can initiate a "treat to intercept" strategy, potentially preventing the development of PsA.
- Dermatologists can manage all domains of the patient's condition, including skin disease which is of significant concern to patients.



In the discussion, both speakers agreed on the importance of their disciplines working together, highlighting the benefits of multidisciplinary teams in managing psoriatic disease. They emphasized patient-centered care and advocated for patients to participate actively in their treatment process.

BE IT RESOLVED THAT CLINICAL ENTHESITIS INDICES DO NOT REFLECT TRUE ENTHESITIS AND HENCE SHOULD BE DISCONTINUED

Supporting Discontinuation: Prof. Sibel Zehra Aydin, Canada

1. Randomized controlled trials using clinical enthesitis indices as secondary outcome measures (e.g. LEI, MASES, SPARCC) have shown high placebo response rates (Figure 1), raising concerns about their face and content validity.

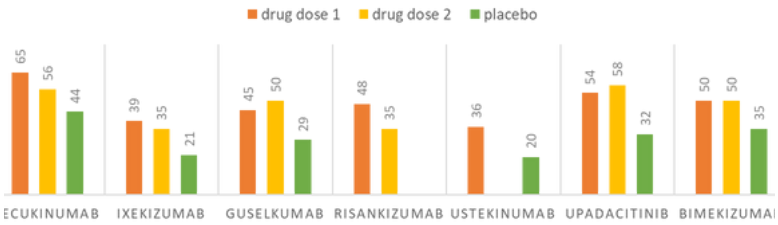
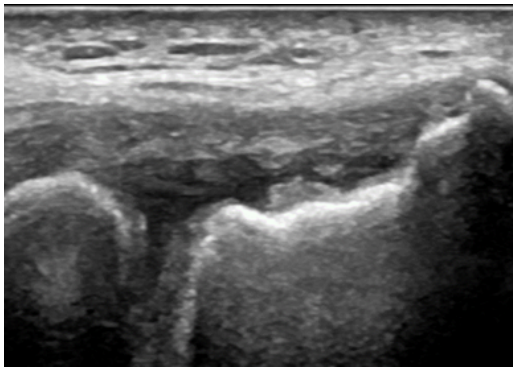


Figure 1. Resolution of enthesitis in 24 weeks in RCTs (these are not head-to-head trials, and some have been using different clinical indices. Therefore, studies should not be compared with each other). McGonagle D, Rheumatology (Oxford). 2021 ; McInnes et al, NEJM, 2021; Kristensen LE, ARD, 2022; McInnes et al, Lancet, 2013; McInnes et al, Lancet, 2023; Mease et al, ARD, 2020

2. Physical exam detects “enthesalgia”, which frequently does not mean inflammatory enthesitis. The crucial role of enthesitis in the pathogenesis of PsA could not be shown by using clinical enthesitis indices, likely due to these indices lacking specificity to detect inflammatory enthesitis.

3. US provides a more detailed assessment of the entheses that allows the visualization of the inflammation. The enthesitis detected by US improved the understanding of the transition between psoriasis and PsA.



Opposing Discontinuation: Prof. Atul Deodhar, USA

1. Clinical enthesitis indices, despite limitations, have been validated and are widely used in clinical trials, endorsed by FDA and EMA for drug approval.

2. US, while promising, faces challenges like operator dependency, lack of standardization, and moderate reliability, limiting its current utility as a standalone tool.

EXTENDED REPORT

Reliability of a consensus-based ultrasound definition and scoring for enthesitis in spondyloarthritis and psoriatic arthritis: an OMERACT US initiative

Peter V Balint,[1] Lene Terslev,[2] Philippe Aegerter,[3] George Arthur Willem Bruyn,[4] Isabelle Chary-Valckenaere,[5] Frederique Gandjbakhch,[6] Annamaria Iagnocco,[7] Sandrine Jousse-Joulin,[8] Ingrid Möller,[9] Esperanza Naredo,[10] Wolfgang A Schmidt,[11] Richard J Wakefield,[12] Maria-Antonietta D'Agostino,[13] on behalf of the OMERACT Ultrasound Task Force members

Ann Rheum Dis 2018;77:1730–1735

3. The debate is not about replacing clinical examination of enthesitis with US imaging for diagnostic purposes, but rather about whether clinical indices of enthesitis used in clinical research should be discontinued and replaced with new US-based indices. The clinical indices should not be discontinued until US indices are agreed upon, validated, and standardized for broader clinical research application.

WHAT THE CLINICIAN NEEDS TO KNOW ABOUT GLP-1 AGONISTS IN 2024

During the first day of meeting, **Prof. Philip Mease, USA,** lectured about GLP-1 agonists and what the clinician should know:

- GLP-1 agonists, primarily indicated for diabetes management, also induce significant weight loss.
- Weight loss is linked to improved psoriasis severity, suggesting a potential role for GLP-1 agonists in psoriatic disease.
- While direct evidence is lacking, further investigations into GLP-1 agonists for psoriasis and PsA is warranted, especially in obese patients.

HOW TO MANAGE CARDIOVASCULAR ISSUES IN PSORIATIC DISEASE IN A BUSY CLINIC

The session *How to Manage Cardiovascular Issues in Psoriatic Disease in a Busy Clinic* was practical and to the point, run by **Prof. Claudia Schainberg, rheumatologist from Brazil** and **Prof. Cheryl Rosen, dermatologist from Canada.**

Prof. Schainberg focused on the need for early recognition and appropriate management of cardiovascular comorbidities in patients with PsA to prevent early morbidity and mortality. Key points were:

- The common pathogenetic mechanisms of PsA and cardiovascular comorbidities, including proinflammatory cytokines such as TNFα.
- The need to identify potential cardiovascular comorbidities, based on clinical history, assessment of risk factors such as diabetes or obesity, and complementary blood tests, ECG and imaging/ functional tests.
- General measures should be implemented in routine clinical practice. These include a healthy lifestyle (diet, exercise, weight loss, stop smoking and limit alcohol intake) and aggressive management of dyslipidemia, hypertension and diabetes.
- Treating PsA to remission with targeted molecules or combination treatments and minimizing the use of glucocorticoids and NSAIDs.

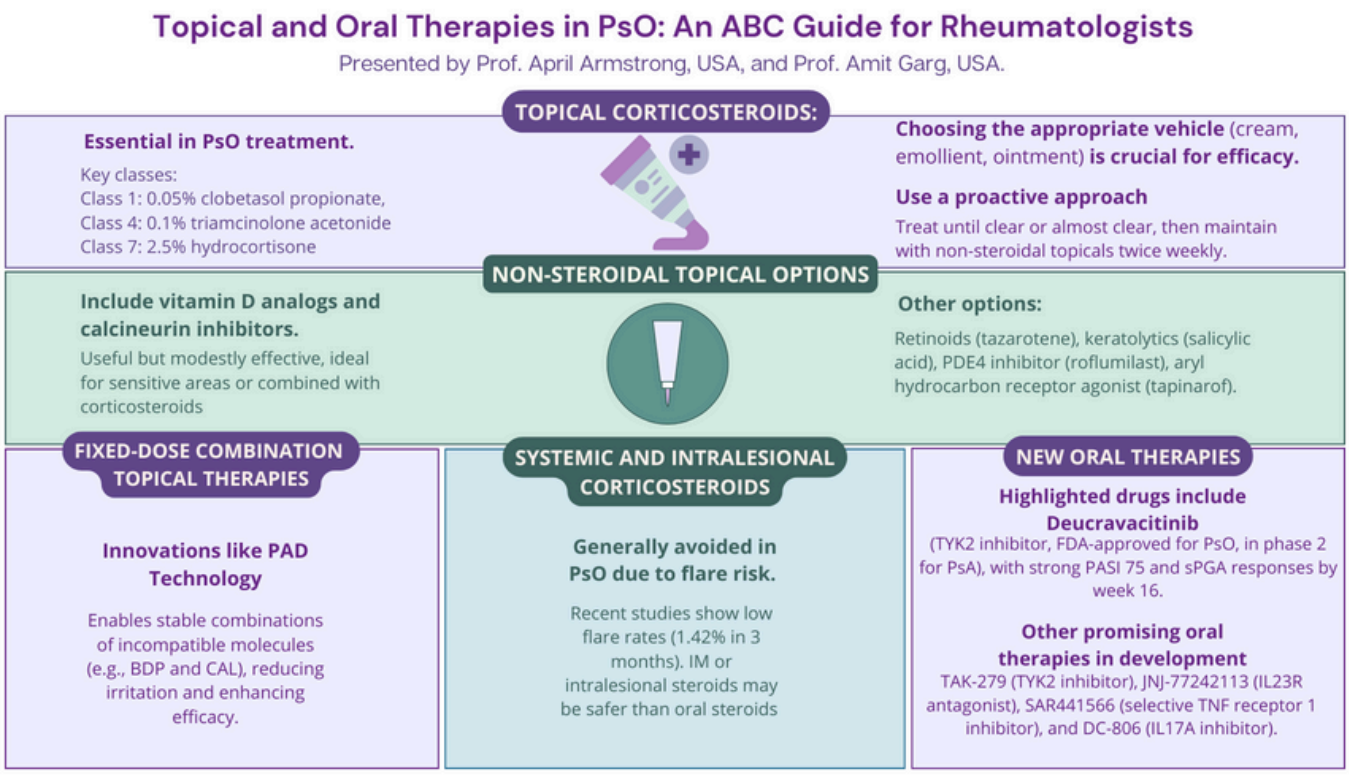
Prof. Rosen focused on the awareness among dermatologists about the presence of cardiovascular comorbidities in patients with psoriasis. She underlined:

- The need for cardiovascular risk assessment, particularly screening for hypertension, diabetes and dyslipidemia, for all patients with psoriasis
- The need for a multidisciplinary approach, including primary care physicians, cardiologists and dermatologists as per American Academy of Dermatology/ National Psoriasis Foundation guidelines.
- The practical difficulties of cardiovascular risk assessment in a busy clinic, such as lack of time, lack of supportive staff or lack of financial incentive.
- Finally, she presented the results from her survey of Toronto dermatologists that showed that approximately ¾ of dermatologists are aware of screening their patients for cardiovascular disease.

MHC-I-OPATHY: UNIFIED CONCEPT FOR ETIOLOGY OF SEVERAL MHC-ASSOCIATED CONDITIONS INCLUDING PSORIASIS AND PSA

P**rof. Wilson Liao, USA,** and **Prof. Dennis McGonagle, UK,** presented the concept of MHC-I-opathies:

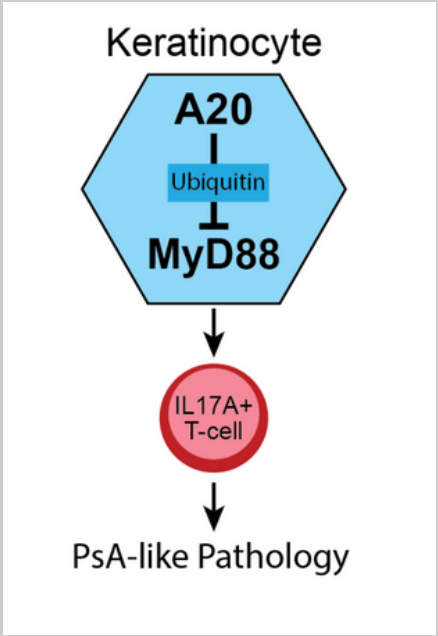
- The seronegative spondyloarthropathies (SpA) were described by Moll, Wright, and colleagues in 1974 and are characterized by spinal involvement, oligoarthritis, psoriasis, Behçet's disease (BD), and intestinal inflammation, and not associated with autoantibodies. The concept has recently consolidated into the umbrella terminology "MHC-I-opathy" when it was demonstrated that these disorders are MHC class-I driven and have an epistatic interaction with endoplasmic reticulum aminopeptidase 1 (ERAP1), which is involved in peptide cleavage.
- An interesting thing of the MHC-I-opathy concept is what we term differential immunopathology, whereby for example, nail disease is not linked to HLA-C*w6 in psoriasis, intestinal inflammation not linked to HLA-B*27 in SpA, and neurological or intestinal involvement in BD is not linked to HLA-B*51.
- The MHC-I genetics of PsA are relatively unclear. HLA -C*w6 in psoriasis is associated with skin involvement but not joint involvement. HLA-B*27 is associated with axial involvement. Also, HLA-B*39, HLA-B*08, HLA-B37, HLA-C*07 and HLA-C*02 may be linked to arthritis.
- Further support for the presence of PsA in the MHC-I-opathy concept is the demonstration of increased CD8+ T cell inducible IL-17A production in psoriatic synovial fluid but not in rheumatoid.
- In psoriasis, several functional pathomechanisms by which MHC class I molecules increase psoriasis susceptibility occur.
- These include antigen presentation, HLA regulation of natural killer cells and CD8+ T cells through killer immunoglobulin-like receptors (KIR), and HLA regulation of dendritic cells through leukocyte immunoglobulin-like receptors (LILR).
- Interestingly, these same mechanisms not only impact psoriasis but also the ability of some individuals to spontaneously suppress HIV-1 infection, individuals known as HIV-1 elite controllers. This striking prominence of MHC-I in psoriasis and anti-viral immunity provides insight into why autoimmune alleles are maintained in the human gene pool and how protective anti-viral pathways may be linked to aberrant activation of MHC-I-opathies.



MOUSE MODELS

Dr. Bahram Razani, USA, presented work on an *Innovative Mouse model of PsA*

- Background: A20 (Tnfaip3) expression is reduced in psoriatic plaques and polymorphisms in the A20 (Tnfaip3) locus that reduce its expression or function are genetically linked to both psoriasis and PsA.
- Knock-in mutant mice that prevent A20 binding to ubiquitin develop PsA-like disease. Cells from these mice show inappropriately extended innate immune signaling following transient stimulation.
- Deletion of A20 in keratinocytes leads to both spontaneous psoriasiform dermatitis and PsA-like disease in distal digits that requires IL17A and T cells.
- A20 restrains spontaneous MyD88 signaling in keratinocytes to prevent PsA-like disease.



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SHORT COURSE @GRAPPA: AN INTRODUCTION TO EPIDEMIOLOGY

The first Short course @GRAPPA - An Introduction to Epidemiology was held in response to a survey which indicated an interest among GRAPPA members to attend training in epidemiology methods.

Prof. Gary Macfarlane, UK, introduced the key concepts of epidemiology: occurrence, distribution and determinants. He spoke about the fundamentals of study designs, including case control studies, prospective and retrospective cohort studies and nested case-control studies. He stressed the importance of carefully defining cases and controls. **Prof. Gareth Jones, UK,** then defined bias and confounding, discussed common sources of selection and information bias, and methods to minimize bias and confounding when designing studies. This was followed by **Dr. Lihi Eder, Canada,** talking about real world data and the pros and cons of using patient registers and administrative health/ electronic medical record data for studying psoriatic disease.

Participants were then divided into groups to plan a study to answer the question “Does weight loss improve risk for PsA” using different study designs. **Dr. Alexis Ogdie, USA,** and Dr Eder led the discussion which identified drawbacks of all study methods.

In the final two talks, Prof. Jones presented the fundamentals of analysis, including risk ratios, incident rates, linear regression, logits and model building, and Dr. Ogdie gave an overview of prediction and causality. She stressed that you cannot identify risk factors in a cross-sectional study.

The course concluded with a workshop in which participants discussed limitations and challenges of a range of PsA prediction papers. Participants enjoyed this practical application and discussion of the theories presented throughout the course.

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WE THANK THE FOLLOWING MEMBERS FOR THEIR YEARS OF SERVICE:

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- Kristina Duffin, USA

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WE WELCOME THE FOLLOWING NEWLY ELECTED MEMBERS:

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- Laura Coates, UK (rheum)

NEWSLETTER CREDITS

Thank you to the presenters who wrote their own summaries. In addition, we are grateful for the summaries collected and written by the following Y-GRAPPiAns:

Dr. Gizem Ayan, Turkey: HIPPOCRATES, D2T PsA and Psoriasis, GRAPPA Slide Library, and Innovations in Education Workshop.

Dr. Hanna Johnsson, UK: Omar Alzayat's pilot research project summary, What you Always Wanted to Know About Science but Were Afraid to Ask Workshop, and Introduction to Epidemiology.

Dr. Maria-Angeliki Gkini, UK: Industry Collaboration Meeting, How to Manage Cardiovascular Issues in Psoriatic Disease in a Busy Clinic? and PsO outcomes for the Rheumatologist.

Dr. Huidi Shucheng, China: Inflammatory memory, and Challenges and Opportunities of Artificial Intelligence (AI) In Psoriatic Diseases.

Dr. Shikha Singla, USA: World Café and What the Clinician Needs to Know About GLP-1 Agonists in 2024

Dr. Andre Ribeiro, Brazil: US workshop, Y-GRAPPA, and OMERACT.

Dr. Betul Macit, USA: Debate: Be It Resolved That Clinical Enthesitis Indices Do Not Reflect True Enthesitis and Hence Should Be Discontinued.

Dr. Keith Colaco, Canada: Project Updates on Biomarkers, AxPsA Pilot Study, DUET, SAGE, COMPOSITION, and Treatment Recommendations.

Dr. Lyn Chincay, Peru: Current Challenges and Opportunities in Psoriatic Disease Research, and PsO outcomes for the Rheumatologist.

Dr. Pamela Diaz, Chile: MRI Workshop, How to Manage Cardiovascular Issues in Psoriatic Disease in a Busy Clinic? and Debate: Managing MSK Symptoms in PsO Patients: Who Should be in the Driver Seat?

Dr. Daniela Tovar, Peru: Topical and Oral Therapies in PsO: An ABC Guide for Rheumatologists.

Dr. Murat Torgutalp, Germany: Primary Outcomes of the AXIS Study Findings.

Dr. Dimitri Luz, Brazil: What the Clinician Needs to Know About GLP-1 Agonists in 2024.

Dr. Kaiyang Song, UK: Current Challenges and Opportunities in Psoriatic Disease Research.

Sarah Romanelli, USA: IDEOM.

Dr. Hanna Johnsson, UK, coordinated the work and edited the texts; **Annie Spangler, USA,** put everything together with photos and links, and **Dr. Kristina Callis Duffin, USA,** provided senior GRAPPA oversight.