ACR 2024

DO NOT MISS HIGHLIGHTS IN PSORIATIC DISEASE

NOVEMBER 2024

Y-GRAPPA members prepared this Newsletter. It highlights some of the very interesting abstracts on psoriatic disease that will be presented at the 2024 ACR Convergence in Washington DC.

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NEWSLETTER

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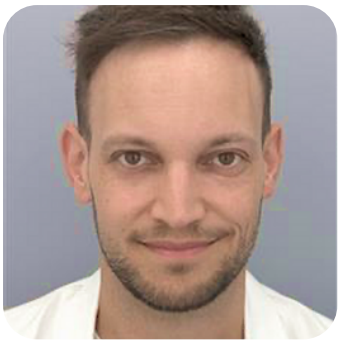
Young Group for Research and Assessment of Psoriasis and Psoriatic Arthritis

BASIC SCIENCE



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IDENTIFICATION OF PSORIATIC ARTHRITIS-RELATED PATHWAYS USING MULTI-OMICS DATA INTEGRATION

Vinod Chandran et al

Sunday, November 17, 2024
3:30PM-3:45PM
Location: Room 150AB
Abstract # 1711

Full Abstract here

Why important?

This innovative research enhances our understanding of PsA pathophysiology by integrating multiple types of biological data, revealing novel disease-specific pathways that could improve diagnosis and treatment approaches.

Polling Question

Based on this multi-omics integration study, which of the newly identified pathways do you think hold the most promise for developing targeted PsA treatments?

This research focused on understanding the complex pathophysiology of PsA, a condition that affects up to 24% of patients with psoriasis. The researchers took an innovative approach by integrating multiple types of biological data (multi-omics) from publicly available studies comparing PsA and psoriasis without arthritis (PsC). They conducted a comprehensive scoping review across three major databases (Ovid Medline, Embase, and Cochrane Central) to create a psoriatic disease integration portal.

Using this portal, they analyzed three independent studies focusing on serum samples (Table below), examining differences in proteins, microRNAs (miRNAs), and metabolites between patients with PsA and PsC. Specifically, they identified 5 miRNAs, 34 proteins, and 19 metabolites that were differentially expressed. Through sophisticated bioinformatics analysis using tools like mirDIP, IID, STITCH, pathDIP, and NAViGaTOR, they discovered that 71 target genes of the 5 miRNAs were connected with 10 proteins and 19 gene interactors of 3 metabolites.

The integration revealed 71 statistically significant pathways, of which 39 were found to be relevant to PsA based on existing literature. Most importantly, 25 of these pathways were newly identified as potentially important in PsA pathophysiology, including signaling pathways such as RANKL, oncostatin M, HIF-1, PDGFR-beta, M-CSF, IL-7, and IL-18. These pathways are particularly relevant as they relate to osteoclastogenesis, angiogenesis, and inflammation - key processes in PsA development.

IDENTIFICATION OF PSORIATIC ARTHRITIS-RELATED PATHWAYS USING MULTI-OMICS DATA INTEGRATION

Vinod Chandran et al

PsA vs PsC serum study	No of PsA, PsC patients	Biomarkers	No of differentially expressed markers between PsA and PsC	Pathways identified in the study
Lattekivi *et al.* 2022[1]	12,12	miRNA	5	circadian rhythm, intercellular signaling by second messengers
Leijten *et al.* 2021[2]	20,18	protein	34	IL-17, JAK-STAT, NF-kB signaling pathways,ECM-receptor interaction, osteoclast differentiation
Koussiouris *et al.* 2023[3]	26,27	metabolite	19	Study focused on identifying metabolites

Table 1. The three independent serum studies comparing PsA and PsC selected for the preliminary integrative analysis including the pathways identified by these studies.

SEX DIFFERENCES IN SERUM PROTEOMIC PROFILES OF MALES AND FEMALES WITH PSORIATIC ARTHRITIS

Steven Dang et al

Sunday, November 17, 2024
3:30PM-3:45PM
Location: Room 150AB
Abstract # 1709

Full Abstract here

Why important?

This pioneering research provides the first molecular-level analysis of sex-specific differences in PsA, paving the way for personalized treatments and improved diagnostics based on patient sex.

Polling Question

Given the study's finding of significantly more unique differentially expressed proteins in male compared to female patients, which aspect do you think should be prioritized for future research?

a) Male molecular changes
b) Sex-specific biomarkers
c) Therapeutic pathways
d) Validation in larger, diverse patient populations

This research investigated sex-specific differences in PsA by analyzing serum proteins in 100 patients with PsA (equally split between males and females) and 50 healthy controls using an aptamer-based assay capable of measuring over 7,000 proteins. The study utilized sophisticated bioinformatics tools including the Limma package for differential analysis, pathDIP for pathway identification, and NAViGaTOR for protein-pathway network construction. Multiple supervised classifiers were employed, including logistic regression with elastic net, linear discriminant analysis, support vector machine, and random forest, to identify key protein biomarkers.

The analysis revealed striking differences between sexes, with males showing 741 unique differentially expressed proteins (DEPs) compared to controls, while females had only 31 unique DEPs. Additionally, 200 proteins were shared between both sexes with PsA compared to controls. The study identified several sex-specific pathways in male versus female patients, including Rho GTPase signaling, angiogenesis, focal adhesion, IL-18 signaling, neutrophil extracellular trap formation, Fc gamma R-mediated phagocytosis, platelet function, ErbB signaling, kit receptor signaling, phosphatidylinositol signaling, and epithelial-mesenchymal transition regulators.

Notably, males showed more proteins (10, including SRC, LYN, PDE5A) belonging to these pathways compared to females (1 protein, PPIF). The multi-protein biomarker classifiers performed excellently for both sexes (AUC > 0.9). Through random forest analysis, the study identified both shared proteins between males and females (such as macrophage migration inhibitory factor and C3b) and sex-specific proteins. Male-specific proteins included PI3KCA/PIK3R1, Nek7, and IL-36 alpha, while female-specific proteins included G1/S-specific cyclin E1 and mitochondrial fumarate hydratase. These sex-specific pathways were particularly related to immune cell function, cytokine signaling, and intracellular signaling mechanisms.

SEX DIFFERENCES IN SERUM PROTEOMIC PROFILES OF MALES AND FEMALES WITH PSORIATIC ARTHRITIS

Steven Dang et al

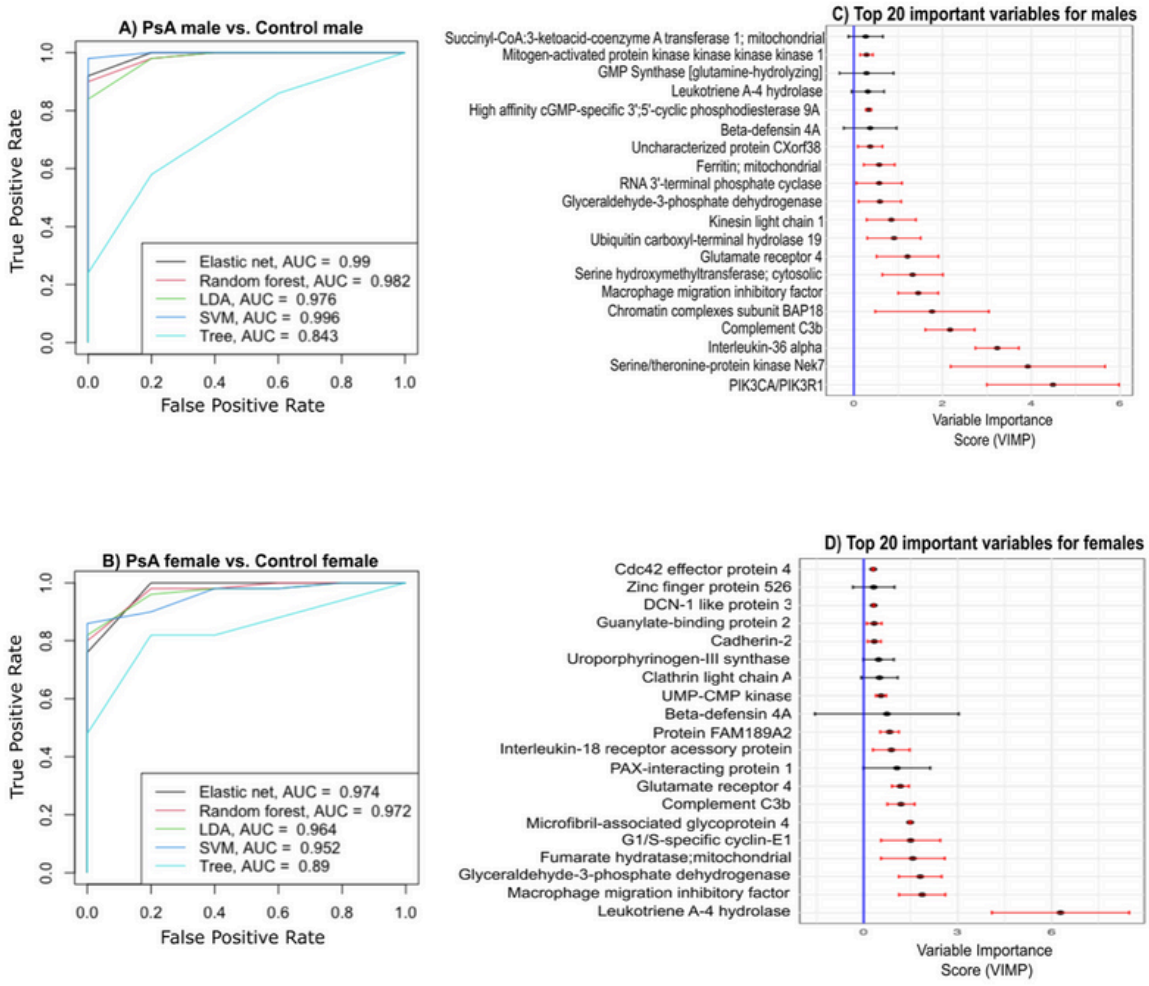

Figure 3: Performance of multi-protein biomarker classifiers for PsA vs. controls. Discriminative ability of classifiers by AUC in male PsA vs. male controls (A) and female PsA vs. female controls (B). Variable importance analysis of proteins included in the random forest classifiers for males (C) and females (D) depicted as forest plot graphs. Confidence intervals that do not cross 0 indicate proteins significantly contributing to model discriminative ability after internal cross-validation. AUC, area under the curve; LDA, linear discriminant analysis; SVM, support vector machine; Tree, decision tree.

PSORIASIS PATIENTS AT RISK FOR PSORIATIC ARTHRITIS HAVE INCREASED LEVELS OF CIRCULATING PRO-MIGRATORY DENDRITIC CELLS

Shashank Cheemalavagu et al

Saturday, November 16, 2024;
10:30AM-12:30PM
Poster Session A
Abstract # 0067

Full Abstract here

This research investigated the role of dendritic cells in the transition from psoriasis (PsO) to PsA using single-cell RNA sequencing (scRNAseq) on blood samples from treatment-naïve patients. The study compared patients with low-risk PsO (LR-PsO), high-risk PsO (HR-PsO, having ⩾2 risk factors), and PsA. Using advanced genomic analysis techniques and the 10x Genomics Chromium platform, they discovered an increase in type II conventional dendritic cells (cDC2) in HR-PsO compared to LR-PsO patients.

The research revealed increased expression of CXCR4, a chemokine receptor involved in cell migration, in HR-PsO and PsA cDC2 cells compared to LR-PsO. This finding was validated through flow cytometry. Furthermore, migration assays demonstrated that dendritic cells from HR-PsO patients showed significantly higher migration than those from LR-PsO patients. Importantly, this increased migration could be blocked using a CXCR4 inhibitor (AMD3465), confirming the specific role of CXCR4 in this process. These findings suggest that CXCR4+ cDC2 cells may play a crucial role in the progression from PsO to PsA.

Why important?

This groundbreaking study reveals a potential cellular mechanism for the transition from psoriasis to psoriatic arthritis through CXCR4+ cDC2 cells, offering promising targets for preventive therapies and early intervention strategies.

Polling Question

Based on this suggested role of CXCR4+ cDC2 cells in psoriatic disease progression, which direction would you prioritize?

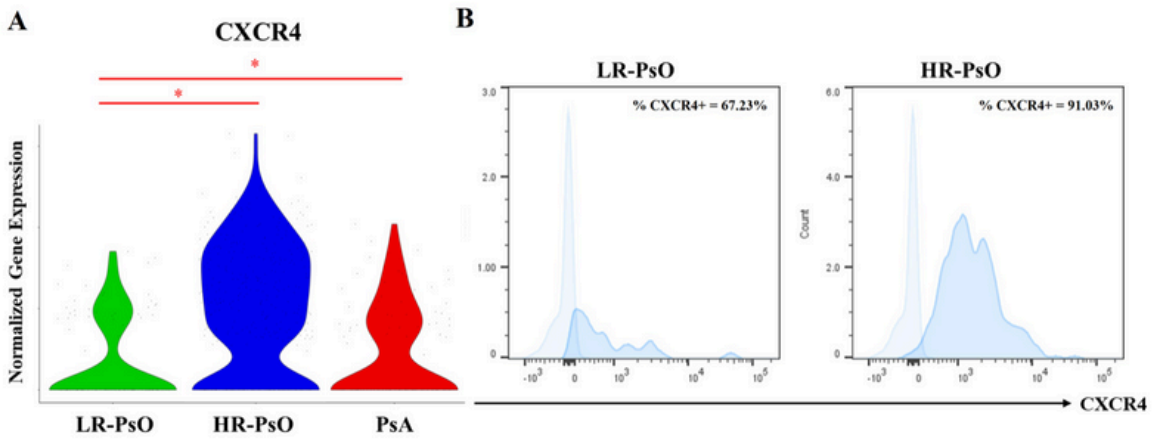

Figure 2: CXCR4 expression. (A) Violin plot of CXCR4 expression from scRNAseq. *indicates FDR < 0.05. (B) Representative FACS analysis shows increased frequency of CXCR4+ cDC2 in PBMC from HR-PsO vs LR-PsO, $p < 0.05$ by student's t-test (n = 5).

BASIC SCIENCE

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STAGE-SPECIFIC ROLES OF INTERLEUKIN-23/INTERLEUKIN-17 AXIS AND TYPE 1 REGULATORY T CELLS DYNAMICS IN AXIAL SPONDYLOARTHRITIS

Jina Yeo et al

Saturday, November 16, 2024
10:30AM-12:30PM
Poster Session A
Abstract # 0071

Full Abstract here

Despite the central role of the IL-23/IL-17 axis in axSpA pathogenesis, treatments targeting IL-23 show inconsistent effectiveness across axSpA subtypes. This study hypothesized that the IL-23/IL-17 axis varies with disease stage and is influenced by type 1 regulatory T (Tr1) cells.

Blood samples were collected from 20 patients with non-radiographic axSpA (nr-axSpA) and 24 patients with radiographic axSpA (r-axSpA) and analysed for IL-23 and IL-17 serum levels by ELISA. The fractions of CD4+IL-17A+ cells, monocytes (CD14+HLR-DR+), DCs (CD11c+HLA-DR+), and Tr1 cells (CD4+CD49b+LAG3+FoxP3-IL-10+) were analysed using flow cytometry. Healthy CD4+ T cells were co-cultured with monocyte-derived DCs (moDCs) from patients to investigate for their ability to produce IL-17.

Serum IL-23 was higher in nr-axSpA than r-axSpA ($p = 0.014$), but there was no difference in IL-17 levels. Tr1 cells were significantly higher in nr-axSpA than in r-axSpA. Nr-axSpA monocytes and DCs produced more IL-23 than cells from r-axSpA, and IL-10 treatment reduced IL-23 production by nr-axSpA moDCs, but not r-axSpA moDCs. Nr-axSpA derived moDCs stimulated the production of more proinflammatory cytokines in CD4+T cell (healthy) than r-axSpA.

Why important?

The IL-23/IL-17 axis is differently regulated in spondyloarthritis subtypes with a role of type 1 regulatory T cells.

Polling Question

Does the lack of difference in IL-17 and Th17 cell levels suggest an IL-17/Th17-independent or IL-23/IL-17 independent pathogenesis?

ENHANCED EXPRESSION OF GPR65 IN INFLAMMATORY SITES AND BONE FORMATION REGIONS IN ANKYLOSING SPONDYLITIS: EVIDENCE FROM SCRNA-SEQ ANALYSIS

Yong-Wook Park et al

Saturday, November 16, 2024
10:30AM-12:30PM
Poster Session A
Abstract # 0068

Full Abstract here

T helper 17 (Th17) cells play a pivotal role in the pathogenesis of ankylosing spondylitis (AS) but not all Th17 cells contribute equally. Pathogenic Th17 (pTh17) cells, able to simultaneously produce IL-17A, IFN-γ, and GM-CSF, are associated with higher disease activity in AS. GPR65 has previously been identified as a marker of pTh17 cells and this study aimed to validate GPR65 as an upregulated molecule in pTh17 cells and spinal tissue in AS.
scRNA-seq and protein expression analyses were performed on blood and tissue samples. SKG mice ectopic bone was analysed to validate GPR65 expression.
GPR65 expressing cells had increased levels of IL-17, IFN-γ, and TNF-α compared to GPR65-negative cells. In spinal tissue samples from patients with AS, there was a marked increase in GPR65 expression compared to healthy controls. In SKG mice, there was high GRP65 expression at sites of ectopic bone formation with associated severe inflammation.

Why important?

GPR65 is a key molecule upregulated in pathogenic Th17 cells and spinal tissue in AS, suggests it is a potential novel drug target.

Polling Question

Are pTh17 cells and GPR65 the main drivers in AS pathogenesis?

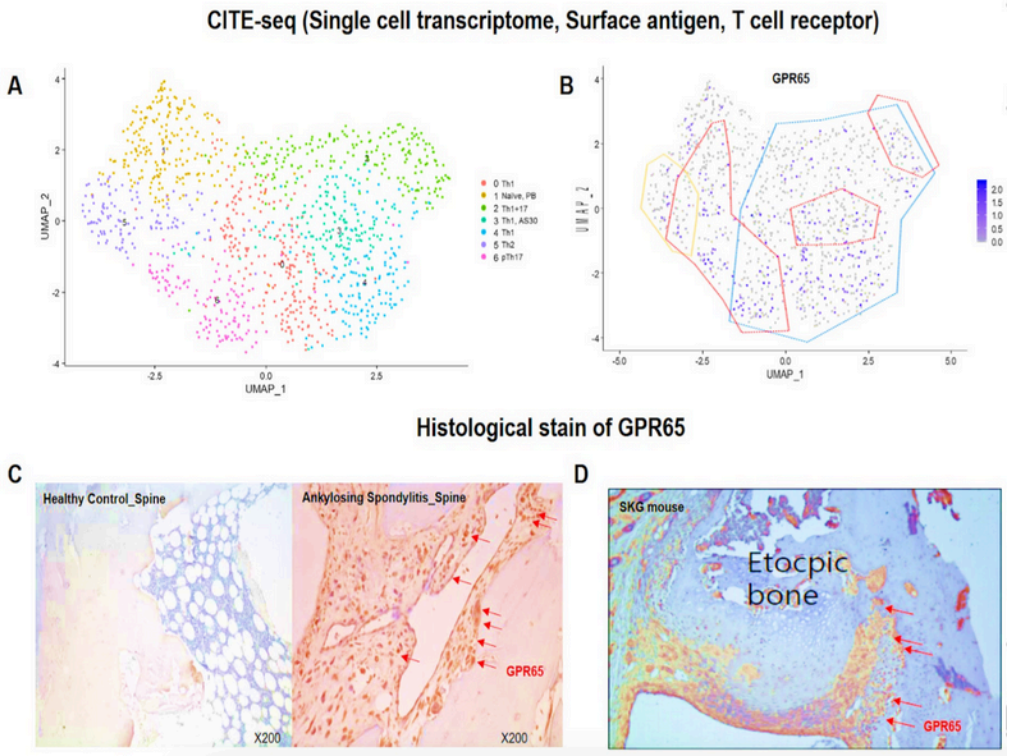

Figure 1. Upregulation of GPR65 in pTh17 Cells, Spinal Tissue of AS Patients, and SKG Mouse Model. Single-cell RNA sequencing (scRNA-seq) identified specific markers of pTh17 cells, with GPR65 being notably upregulated (Figure 1A and 1B). GPR65 expression was elevated in spinal tissue samples, correlating with disease activity (Figure 1C). In the SKG mouse model, GPR65 was highly expressed at sites of ectopic new bone formation and was associated with severe inflammation (Figure 1D).

COMPARATIVE IMMUNOLOGY OF ENTHESEAL ANCHORAGE SITES BETWEEN SPINE, HIP AND KNEE DEMONSTRATES UP TO 70-FOLD GREATER IL-23 INDUCTION FROM AXIAL ENTHESIS BONE: A NEW ANGLE ON THE FAILURE OF IL-23 BLOCKADE IN ANKYLOSING SPONDYLITIS

Mark Harland et al

Saturday, November 16, 2024
10:30AM-12:30PM
Poster Session A
Abstract # 0082

The IL-23 pathway is linked to the pathogenesis of peripheral and axSpA. Unexpectedly, inhibition fails to treat AS. This study investigated for differences in IL-23 production in spinal, hip and knee enthesis peri-entheseal bone (PEB).

PEB was collected from the spinous process (n=5), hip capsule (n=4), and knee (n=4) and analysed through flow cytometry. Ex vivo stimulation was done with LPS and zymosan to assess IL-23 producing capacity using ELISA and LEGENDplex assays.

PEB from the spine and hip was haematopoietically more active (with abundant monocytes and neutrophils) than PEB from the knee. Ex vivo stimulation of spine and hip PEB produced 25-70 fold more IL-23 than knee PEB per gram of tissue (spine = 659.5 pg/g, hip = 1382.1 pg/g, knee = 24.8 pg/g; Figure 1).

Full Abstract here

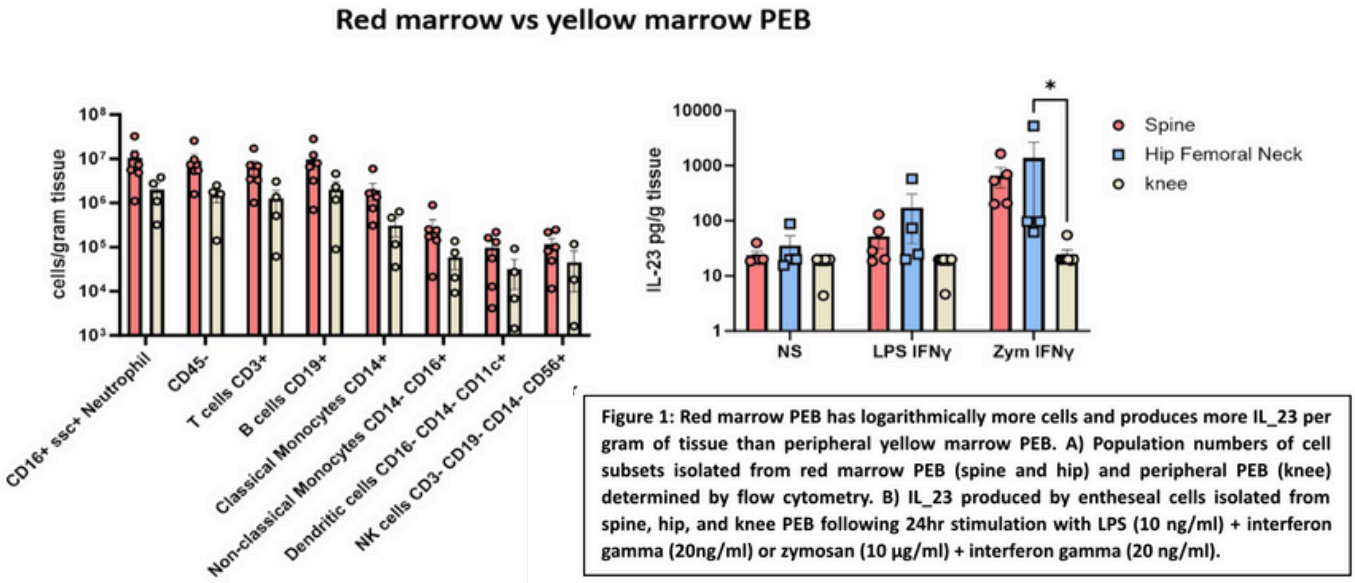

Figure 1: Red marrow PEB has logarithmically more cells and produces more IL_23 per gram of tissue than peripheral yellow marrow PEB. A) Population numbers of cell subsets isolated from red marrow PEB (spine and hip) and peripheral PEB (knee) determined by flow cytometry. B) IL_23 produced by entheseal cells isolated from spine, hip, and knee PEB following 24hr stimulation with LPS (10 ng/ml) + interferon gamma (20ng/ml) or zymosan (10 µg/ml) + interferon gamma (20 ng/ml).

Why important?

IL-23 production is higher in axial than peripheral entheses.

Polling Question

Do you think high dose IL-23 inhibition would treat axSpA more effectively?

CLINICAL HIGHLIGHTS

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REAL-WORLD TREAT-TO-TARGET STRATEGY IN PSORIATIC ARTHRITIS: BASELINE CHARACTERISTICS FROM THE MONITOR-PSA COHORT

Lilja James

Sunday, November 17, 2024
10:30 PM to 12:30 PM
Abstract # 1456

Full Abstract here

The MONITOR-PsA study is a UK-based cohort study that tracked 300 patients with PsA from 13 rheumatology centers between 2018 and 2024 to identify whether diagnostic delays still occur in PsA and to identify factors associated with this occurrence. Participants in the study met standard diagnostic criteria and were treated with a "treat-to-target" approach, with clinical and radiographic data collected to assess disease severity. Results showed an average delay of 34 months before diagnosis, with many participants showing moderate disease activity and joint erosions, especially in the hands and feet. Cardio-metabolic conditions, such as hypertension and diabetes, were common, and 25% of participants had erosive joint damage upon diagnosis. These findings mirrored findings from a 2003 study and underscore the need for earlier diagnosis to reduce the high disease burden and disability in patients with PsA that continues to occur despite advancement in therapy.

Why important?

This study highlights the continued need for timely diagnosis of PsA to prevent irreversible joint damage and improve patient quality of life.

Polling Question

What can we do to shorten the delay in diagnosing PsA?

DIRECT TO PATIENT SCREENING FOR PSORIATIC ARTHRITIS IN PATIENTS WITH PSORIASIS: DIAGNOSIS RATES, REFERRAL PATHWAYS, AND EDUCATIONAL VALUE OF SCREENING

Jessica A Walsh

Monday, November 18, 2024, from 10:30 AM to 12:30 PM
Abstract # 2340

Full Abstract here

This study evaluated the effectiveness of a direct-to-patient (D2P) screening approach to identify patients with psoriasis at risk for Psoriatic Arthritis (PsA) by mailing screening surveys. Patients were randomized into an observation group or an intervention group, the latter divided in two subgroups one of which had direct access to rheumatology whereas the second allowed primary care notification and follow up. The intervention subgroups received the Psoriasis Epidemiology Screening Tool (PEST) survey, educational materials, and a questionnaire on PsA risk.
The intervention group had higher rates of rheumatology visits (3.3% vs. 1.4%) and new PsA diagnoses (2.3% vs. 0.7%) at 6 months, with the direct access subgroup showing higher rates of rheumatology visits (41.3% vs. 2.4%) and new PsA diagnoses (22.2% vs. 12.2%). Additionally, nearly all patients found the educational materials valuable, suggesting D2P screening could improve both diagnosis and education.

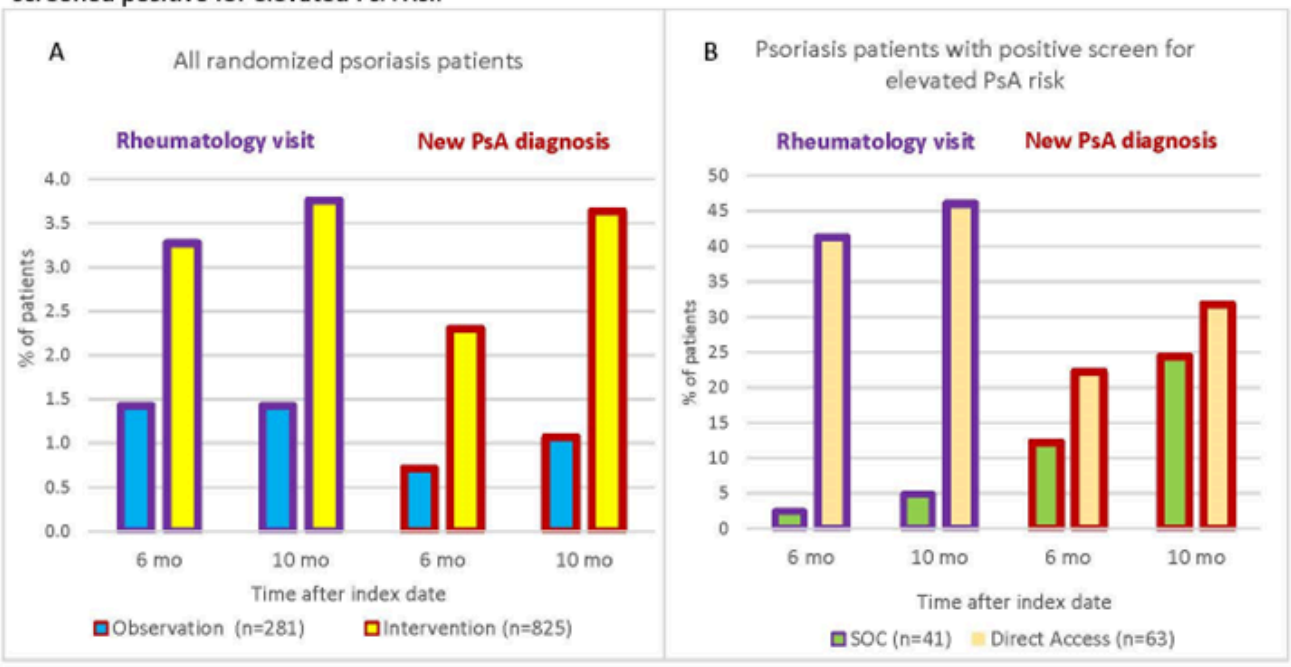
Why important?

A direct-to-patient (D2P) screening approach and direct access to rheumatology for patients with psoriasis increases PsA diagnoses and PsA risk education.

Polling Question

Is it worth investing in mailing PEST questionnaires and providing direct access to Rheumatology clinic to high-riskpatients with psoriasis?

Figure 1. Rheumatology visits and new PsA diagnoses in A) all psoriasis patients and B the subset who screened positive for elevated PsA risk



HAND FUNCTION AND DEVELOPMENT OF PSORIATIC ARTHRITIS IN SKIN PSORIASIS PATIENTS, A PROSPECTIVE COHORT STUDY

Birte Coppers

Monday, November 18, 2024
10:30 AM to 12:30 PM
Abstract # 2335

Full Abstract here

Early diagnosis is crucial to prevent long-term damage in PsA. This study evaluated the risk of PsA in patients with psoriasis based on clinical scores, quality of life measures, disability indices, and hand function.
Among 117 patients followed, 27 developed PsA, with higher scores in HAQ, PSAID, and SF-36 physical components being associated with increased PsA risk. Hand function was initially linked to PsA risk, but this association lessened after adjusting for overall function and quality of life, suggesting hand function reflects broader functional status. These findings support using general well-being and musculoskeletal health scores as potential predictors for PsA development in patients with psoriasis.

Why important?

This study identified specific clinical and quality-of-life measures, including hand function, that may help predict the development of PsA in patients with psoriasis.

Polling Question

Is there an easy way to measure musculoskeletal health in patients with psoriasis that may predict the development of PsA?

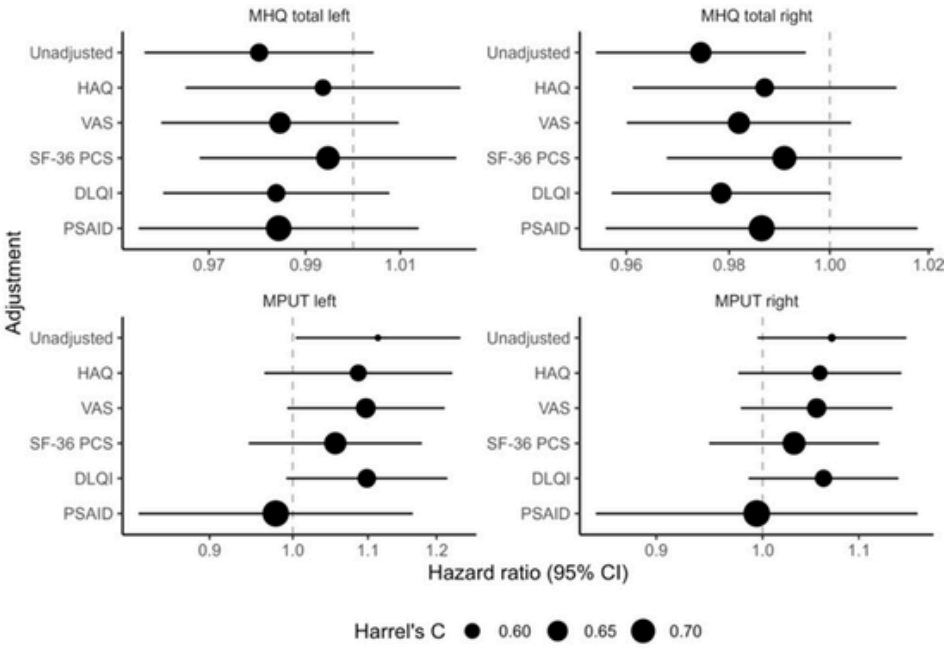


Figure 1. Hazard ratios of hand function measures on the risk of psoriatic arthritis development adjusted by disability/quality of life indices

DO PATIENTS THAT DEVELOP PSA BEFORE PSORIASIS HAVE DIFFERENT DISEASE OUTCOMES?

Fadi Kharouf

Monday, November 18, 2024, from 10:30 PM to 12:30 PM
Abstract # 2328

Full Abstract here

This study investigated differences between patients with PsA who develop arthritis before psoriasis (PsA-before-PsO) and those who develop psoriasis first (PsO-before-PsA).
Of 1,702 patients, 147 (8.6%) had PsA-before-PsO. These patients had significantly higher structural damage, with greater frequency of erosions and a higher modified Steinbrocker score. Patients with PsO-before-PsA had higher rates of nail disease and more severe psoriasis compared to the other group. While there was no significant difference in 5-year disease activity (as measured by swollen joint count), patients with PsA-before-Ps showed faster radiographic progression, with HLA-B*27 positivity and older age being linked to this faster damage. The use of advanced therapies was protective, suggesting a potential strategy for managing radiographic progression in this group.

Why important?

Faster radiographic progression occurs in patients who develop PsA before psoriasis, underscoring the need for tailored diagnostic and management strategies for this subgroup.

Polling Question

How do you diagnose PsA in patients presenting without psoriasis in a timely manner to avoid radiographic damage?

Table 3. Cox-proportional analysis for the time to progression of radiographic damage.

Variables	Increase in modified Steinbrocker score by ≥1			
	Full model		Reduced model	
	HR	p-value	HR	p-value
PsA before Ps vs. Ps before PsA	1.4	0.02*	1.4	0.03*
Age in years^	1	0.01*	1	0.01*
Sex (male/female)	1	0.93		
Duration of PsA in years^	1	0.04*	1	0.09
SJC^	1	0.003*	1	0.002*
Dactylitis (yes/no)	1.5	<0.001*	1.5	<0.001*
Baseline modified Steinbrocker Score^	1	<0.001*	1	<0.001*
HLA-C*06 positive	1.1	0.36		
HLA-B*27 positive	1.2	0.22		
csDMARD use (yes/no)	1.1	0.17		
Biologic or tsDMARD use (yes/no)	0.6	<0.001*	0.6	<0.001*

HR, hazard ratio; PsA, psoriatic arthritis; SJC, swollen joint count; HLA, human leukocyte antigen; cs, conventional synthetic; DMARDs, disease-modifying anti-rheumatic drugs; ts, targeted synthetic; ^ 1-unit increase.

CLINICAL HIGHLIGHTS

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MSc in immunology, Cayetano Heredia Peruvian University
Clinical Assistant, Jorge Reategui Delgado Hospital
Young GRAPPA member
Research focus: axSpA, PsA, ultrasound

dr.lynchinchay
Lyn Chinchay

VALIDATION OF ASAS PRELIMINARY DATA-DRIVEN MRI LESION CUT-OFFS FOR A POSITIVE MRI OF THE SACROILIAC JOINTS IN PATIENTS WITH AXIAL SPONDYLOARTHRITIS AND SUBGROUPS WITH PSORIASIS, IRITIS, AND COLITIS

Susanne Pedersen

Saturday, November 16, 2024
1:00PM-2:30PM
Abstract Session
Abstract # 0821

Full Abstract here

The following number of sacroiliac joint quadrants with the affected lesions have been proposed to improve the specificity of the definition of a positive axSpA MRI scan: ⩾3 erosion (ER), ⩾4 bone marrow edema (BME), ⩾5 fat lesion (FAT), and ⩾2 deep fat lesion extending ⩾1cm from subchondral bone. This study validated the performance of these cut-offs in patients with axSpA with different clinical phenotypes, encompassing patients with concomitant PsO, acute anterior uveitis (AAU), and inflammatory bowel disease (IBD).
Scans were available from 44, 45, 27, 45, axSpA patients with PsO, AAU, IBD, or axSpA alone and 78 matched non-axSpA controls. The specificity was 92.3%, 96.2%, 94.9% 96.2% for BME, ER, FAT and deep fat lesions respectively. These findings supporting the validity of the preliminary ASAS Data-Driven MRI lesion cut-offs.

Why important?

It's important to have a validated method to diagnose and enhance disease activity assessment in axSpA including psoriasis with axial manifestations.

Polling Question

Is it important to continue promoting new proposals for enhancing disease activity assessments in axSpA?

ASSOCIATION OF CONTEXTUAL FACTORS WITH SONOGRAPHIC INFLAMMATORY AND STRUCTURAL PHENOTYPES IN PSORIATIC ARTHRITIS PATIENTS

Andre Lucas Ribeiro

Sunday, November 17, 2024
10:30Aam-12:30PM
Abstract Session
Abstract # 1433

Full Abstract here

This study investigated the impact of contextual factors on the presence and severity of sonographic lesions in patients with active PsA.

115 patients with active PsA underwent a comprehensive US evaluation for inflammatory and structural lesions. The US protocol was extensive, covering 64 joints, 36 tendons, and 16 entheses.

Older age consistently correlated with more severe inflammatory and structural US lesions (adjusted β 6.37 and 14.6, respectively, $p < 0.05$). Higher scores for synovitis and tenosynovitis were observed in patients exposed to b/tsDMARDs, which may indicate that these treatments are markers of disease severity.

Why important?

Patient demographics and treatment history should be integrated with sonographic assessments in PsA.

Polling Question

Do you use ultrasound in your daily practice?

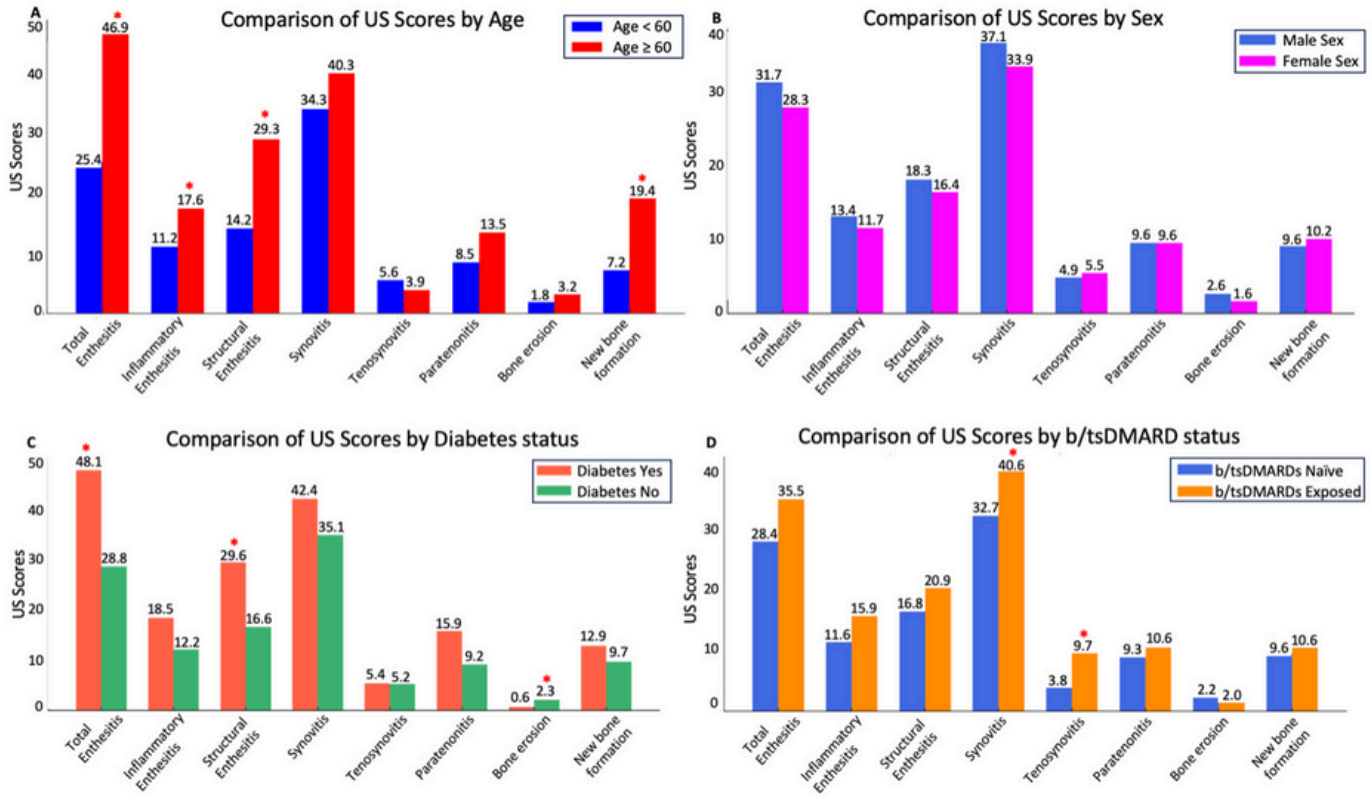


Figure 1. T-test comparison of contextual factors and sonographic features. Sonographic features marked with a "red asterisk" represent significant associations ($p < 0.05$).

CHARACTERISTICS OF PATIENTS WITH PSORIATIC ARTHRITIS PRESENTING WITH AXIAL INVOLVEMENT: RESULTS OF A PROSPECTIVE INTERNATIONAL MULTICENTER STUDY (AXIS)

Murat Torgutalp

Abstract Session
Monday, November 18th
10:30AM-12:30PM
Abstract Session
Abstract # 2334

The AXIS study performed comprehensive clinical and imaging assessments on 409 patients with PsA. Of them, 112 pts (27.4%) were deemed to have axial involvement after final evaluation incorporating expert assessment of imaging. The patients with axial disease were slightly younger (45.2 vs. 47.6 years), more frequently male (56.3% vs. 51.5%), and had a higher frequency of HLA-B27 (22.4% vs. 10.8%), inflammatory back pain (74.7% vs. 43.4%), and elevated C-reactive protein levels (52.7% vs. 37.4%) compared with patients without axial involvement.

Why important?

Better identification of axial involvement in PsA may improve our treatment strategies.

Polling Question

What is your strategy to identify patients with psoriatic arthritis with axial involvement?

Full Abstract here

	Overall	Initial Investigator Assessment			Final Investigator Assessment		
Variable	N = 409	Axial involvement present N = 153	Axial involvement absent N = 256	p-value	Axial involvement present N = 112	Axial involvement absent N = 297	p-value
Male sex	216 (52.8)	87 (56.9)	129 (50.4)	0.20	63 (56.3)	153 (51.5)	0.39
Age, years	47.0 ± 13.0	47.2 ± 13.6	46.9 ± 12.6	0.75	45.2 ± 13.8	47.6 ± 12.6	0.10
Manual occupation	183 (44.7)	71 (46.4)	112 (43.8)	0.60	56 (50.0)	127 (42.8)	0.19
Smoking, ever	181 (44.3)	65 (42.5)	116 (45.3)	0.58	48 (42.9)	133 (44.8)	0.73
Body mass index, kg/m²	28.3 ± 7.8	28.1 ± 9.9	28.4 ± 6.3	0.28	28.1 ± 11.4	28.4 ± 6.0	0.17
Participant's history of psoriasis	394 (96.3)	149 (97.4)	245 (95.7)	0.38	108 (96.4)	286 (96.3)	>0.99
Psoriasis symptom duration, years	14.7 ± 12.7	14.3 ± 11.8	14.9 ± 13.3	0.91	13.7 ± 11.5	15.0 ± 13.2	0.65
Any psoriatic nail affection	220 (53.8)	83 (54.2)	137 (53.5)	0.89	62 (55.4)	158 (53.2)	0.70
PsA symptom duration, years	4.1 ± 2.9	4.4 ± 3.0	3.9 ± 2.8	0.13	4.2 ± 2.8	4.1 ± 2.9	0.57
Peripheral arthritis, ever	383 (93.6)	140 (91.5)	243 (94.9)	0.17	103 (92.0)	280 (94.3)	0.39
Enthesitis, ever	241 (58.9)	86 (56.2)	155 (60.5)	0.39	66 (58.9)	175 (58.9)	>0.99
Dactylitis, ever	187 (45.7)	71 (46.4)	116 (45.3)	0.83	57 (50.9)	130 (43.8)	0.20
Any back pain, ever	349 (85.3)	138 (90.2)	211 (82.4)	**0.032**	99 (88.4)	250 (84.2)	0.28
Age of current BP onset, years (n=296)	34.6 ± 15.8	35.5 ± 16.0	33.9 ± 15.6	0.52	34.2 ± 15.6	34.7 ± 15.9	0.71
Duration of current BP, years (n=296)	12.1 ± 14.7	11.2 ± 14.9	12.7 ± 14.6	0.62	10.8 ± 14.5	12.7 ± 14.8	0.37
IBP - Global evaluation (n=296)	157 (53.0)	89 (71.2)	68 (39.8)	**<0.001**	68 (74.7)	89 (43.4)	**<0.001**
Good response to NSAIDs (n=296)	225 (76.0)	103 (82.4)	122 (71.3)	0.028	73 (80.2)	152 (74.1)	0.26
History of uveitis	18 (4.4)	5 (3.3)	13 (5.1)	0.39	5 (4.5)	13 (4.4)	>0.99
History of IBD	3 (0.7)	2 (1.3)	1 (0.4)	0.56	0 (0.0)	3 (1.0)	0.57
Family history of spondyloarthritis	186 (45.5)	70 (45.8)	116 (45.3)	0.93	59 (52.7)	127 (42.8)	0.072
HLA-B27 positivity (n=402)	56 (13.9)	24 (16.3)	32 (12.5)	0.29	24 (22.4)	32 (10.8)	**0.003**
BASDAI	4.4 ± 2.5	4.6 ± 2.5	4.4 ± 2.5	0.44	4.7 ± 2.5	4.3 ± 2.5	0.25
ASDAS	2.7 ± 1.0	2.8 ± 1.1	2.6 ± 1.0	0.083	2.9 ± 1.1	2.6 ± 1.0	**0.007**
CRP, mg/L	7.2 ± 9.9	8.2 ± 11.0	6.6 ± 9.2	**0.038**	9.8 ± 12.3	6.2 ± 8.7	**<0.001**
Elevated CRP (≥ 5mg/L)	170 (41.6)	71 (46.4)	99 (38.7)	0.12	59 (52.7)	111 (37.4)	**0.005**

The variables are presented as mean ± SD, or as number (%). ASDAS, Axial Spondyloarthritis Disease Activity Score; BASDAI, Bath Ankylosing Spondylitis Activity Index; BP, Back pain; CRP, C-reactive protein; IBD, Inflammatory bowel disease; IBP, Inflammatory back pain; NSAIDs, nonsteroidal anti-inflammatory drugs

Table 1. Demographic and clinical characteristics of patients with and without axial involvement

NAILFOLD VIDEOCAPILLAROSCOPY FINDINGS IN PATIENTS WITH PSORIATIC DISEASE: IS THERE A DISTINCTIVE PSORIATIC PATTERN?

Eduardo Briones-García

Monday, November 18, 2024
10:30Aam-12:30PM
Abstract Session
Abstract # 2320

Full Abstract here

This study evaluated findings on Nailfold Videocapillaroscopy (NVC) in patients with psoriatic disease (PsD) and the association with clinical features.
39 patients with PsD, (29 with PsA and 10 with PsO), and 28 healthy controls were included.
23.1% patients with PsD exhibited a NVC pattern ('psoriatic pattern') consisting of a bordering low capillary density, frequent bushy capillaries with a distinctive morphology ('basket-like' morphology), and avascular areas.
The mean capillary density correlated negatively with the DAPSA score (rho: -0.39, p=0.03). There were no differences in the frequency and types of NVC abnormalities between patients with PsA and those with PsO, between those with and without psoriatic nail disease, or according to the presence of active skin or articular disease.

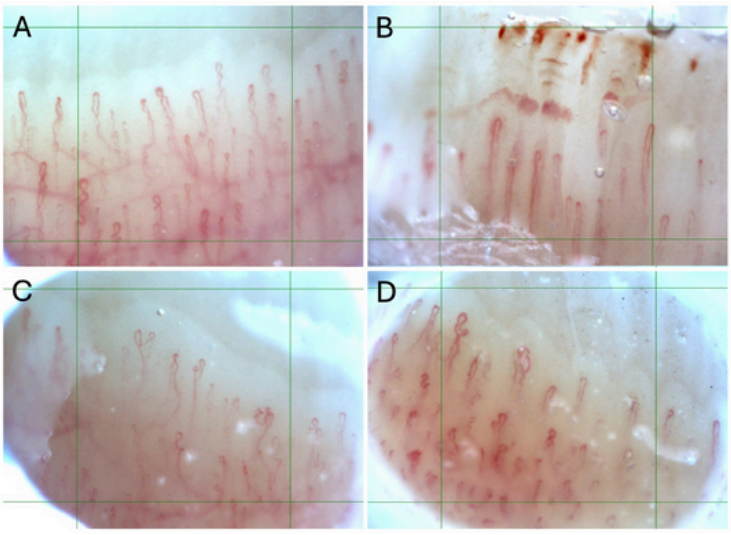
Why important?

Some patients with psoriatic disease have a specific pattern of abnormal nailfold capillaries, suggesting microvascular abnormalities.

Polling Question

How often do you use nailfold video-capillaroscopy in your daily practice?

	Psoriatic disease (N=39)	Controls (N=28)	p
Male, n (%)	20 (51.3)	7 (25)	0.03
Abnormal findings, n (%)	29 (74.4)	4 (14.3)	0.002
Abnormal architecture, n (%)	14 (35.9)	0	<0.001
Mean capillary density, mean (SD)	8.86 ± 0.99	8.86 ± 0.91	0.97
Crossed capillaries, n (%)	37 (94.9)	22 (78.6)	0.04
Tortuous capillaries, n (%)	26 (66.7)	16 (57.1)	0.42
Bushy capillaries, n (%)	29 (74.4)	2 (7.1)	<0.001
Dilated capillaries, n (%)	22 (56.4)	3 (10.7)	<0.001
Giant capillaries, n (%)	1 (2.6)	0	0.39
Maximum capillary diameter, median (IQR)	21.7 (18.5-24.5)	18 (15-22)	0.01
Microhemorrhages, n (%)	12 (30.8)	1 (3.6)	0.005
Avascular areas, n (%)	19 (48.7)	0	<0.001
Neo-angiogenesis, n (%)	2 (5.1)	0	0.22
Normal pattern, n (%)	2 (5.1)	11 (39.3)	<0.001
Atypical/Unusual pattern, n (%)	31 (79.5)	17 (60.7)	0.09
Early SSc pattern, n (%)	5 (12.8)	0	0.04
Active SSc pattern, n (%)	0	0	-
Late SSc pattern, n (%)	1 (2.6)	0	0.39
Psoriatic pattern, n (%)	9 (23.1)	0	0.006
Bushy 'basket-like' capillaries, n (%)	18 (46.2)	1 (3.6)	<0.001



Representative images of NVC in psoriatic disease. A: normal atypical pattern with frequent crossed capillaries. B: Multiple microhemorrhages. C and D: 'Psoriatic pattern': multiple bushy capillaries with a basket-like appearance, borderline low capillary density and avascular áreas

TREATMENT HIGHLIGHTS

André Lucas Ribeiro, MD MMSc
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LOW UVEITIS RATES IN PATIENTS WITH AXIAL SPONDYLOARTHRITIS OR PSORIATIC ARTHRITIS TREATED WITH BIMEKIZUMAB: LONG-TERM RESULTS FROM PHASE 2B/3 TRIALS

Irene E. van der Horst-Bruinsma

Monday, November 18, 2024
10:30 AM to 12:30 PM
Abstract # 2351

Full Abstract here

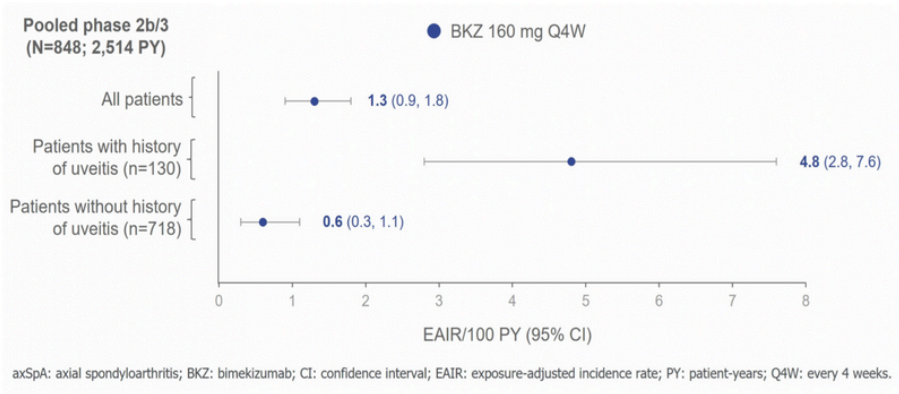
This study presents long-term data from Phase 2b/3 trials evaluating Bimekizumab (BKZ), a dual IL-17A/F inhibitor, in patients with axSpA and PsA. Among axSpA patients (N=848), the exposure-adjusted incidence rate (EAIR) for uveitis was significantly lower at 1.3 events per 100 patient-years (PY) in those treated with BKZ. This compares to an EAIR of 15.4 per 100 PY in the placebo group during the initial 16-week period. Specifically, patients with a prior history of uveitis showed an EAIR of 4.8 per 100 PY, while those without a history demonstrated an EAIR of 0.6 per 100 PY. For PsA patients (N=1,409), the overall incidence of uveitis was very low, with an EAIR of 0.1 per 100 PY across 3,656 PY of BKZ exposure, underscoring the low likelihood of uveitis events in this group. Importantly, all uveitis cases were mild to moderate, and only one instance led to treatment discontinuation, affirming BKZ's favorable safety profile.

Why important?

While IL-17A inhibitors have not shown efficacy in treating uveitis, this study suggests that dual IL-17A/F inhibition may offer significant protection.

Polling Question

Given the low uveitis rates observed with BMK, do you see it as a possible treatment choice for patients with PsA and axSpA and a history of uveitis?



axSpA: axial spondyloarthritis; BKZ: bimekizumab; CI: confidence interval; EAIR: exposure-adjusted incidence rate; PY: patient-years; Q4W: every 4 weeks.

ZASOCITINIB (TAK-279), A HIGHLY SELECTIVE ORAL TYROSINE KINASE 2 (TYK2) INHIBITOR, ELICITS EARLY SKIN RESPONSES AND MINIMAL DISEASE ACTIVITY IN PATIENTS WITH ACTIVE PSORIATIC ARTHRITIS: RESULTS FROM A RANDOMIZED PHASE 2B STUDY

Alice Gottlieb

Sunday, November 17, 2024
10:30 AM to 12:30 PM
Abstract # 1477

Full Abstract here

This Phase 2b study evaluated Zasocitinib (TAK-279), a highly selective oral TYK2 inhibitor, in 290 patients with active PsA. All participants met CASPAR criteria and demonstrated an inadequate response to previous therapies, including biologics, DMARDs, or NSAIDs. Patients were randomized into four groups: 5 mg, 15 mg, and 30 mg Zasocitinib, or placebo, each administered once daily for 12 weeks.

By Week 12, significantly more patients treated with Zasocitinib 15 mg and 30 mg achieved ACR20 response rates (53.3% and 54.2%) compared to placebo (29.2%; p=0.002). Skin improvements were also evident, with 32.8% of patients in the 30 mg group achieving a Physician Global Assessment response at Week 12 (vs. 15.8% for placebo; p=0.034) and with substantially higher achievement of PASI 90 for the 30 mg-dose group. Additionally, 28% and 29.2% of patients on 15 mg and 30 mg doses reached minimal disease activity, compared to 12.5% in the placebo group (p<0.05).

Why important?

This study suggests that Zasocitinib, an oral TYK2 inhibitor like Deucravacitinib, is an effective alternative for both skin and joint symptoms in PsA, adding to our treatment arsenal.

Polling Question

Given Zasocitinib's rapid and significant PASI and joint response, should it be considered as a first-line oral therapy in PsA over existing options?

Figure 1. PASI responses at Week 12 (A) and LS mean change from baseline in PASI (B) in patients with ≥3% BSA psoriatic involvement at baseline.

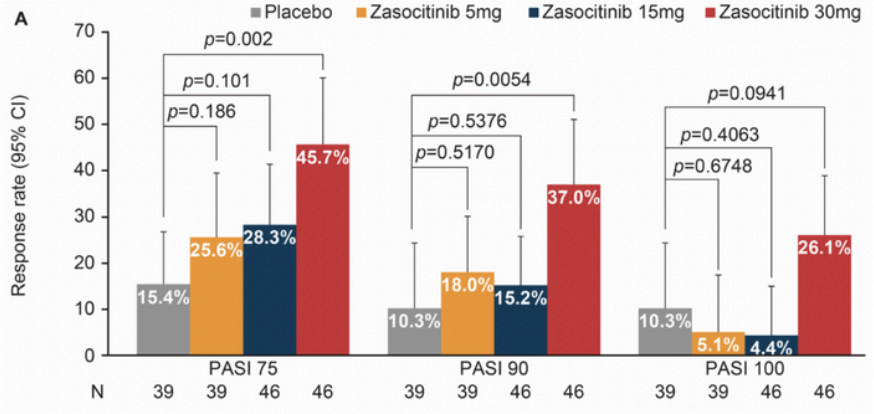
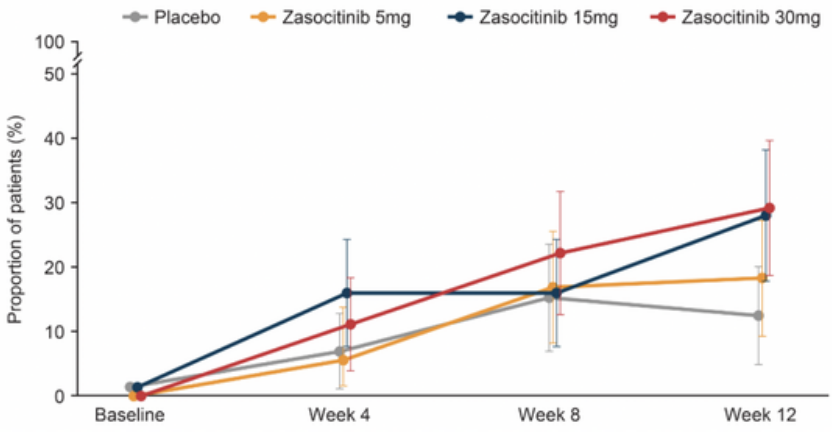


Figure 3. Minimal disease activity responder rate.



BDMARD DRUG SURVIVAL IN COMBINATION THERAPY WITH METHOTREXATE IN PSORIATIC ARTHRITIS: A SYSTEMATIC LITERATURE REVIEW AND META-ANALYSIS

Sélina Hanna Abdelmassih

Saturday, November 16, 2024,
10:30 AM to 12:30 PM
Abstract # 0595

Full Abstract here

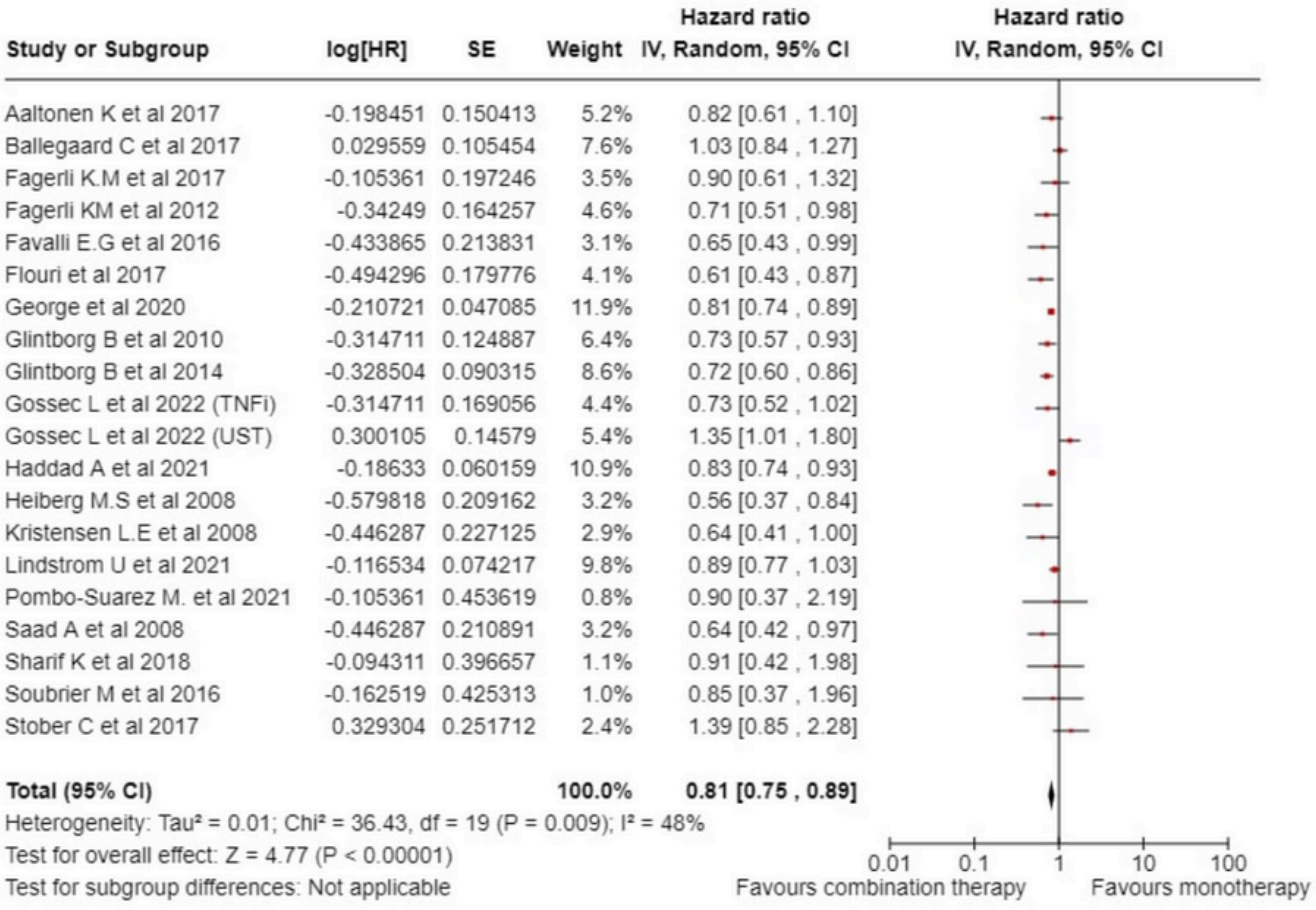
This systematic literature review and meta-analysis explored the survival of biologic disease-modifying antirheumatic drugs (bDMARDs) when used in combination with methotrexate (MTX) in patients with PsA. The study reviewed 19 observational studies involving a total of 28,340 PsA patients, with 17 focusing on TNF inhibitors (TNFi). Results showed that combination with MTX significantly improved drug survival compared to bDMARD monotherapy, with a hazard ratio (HR) of 0.81 (95% CI: 0.75–0.89, p < 0.00001). Excluding non-TNFi bDMARD studies, the HR remained favorable at 0.79 (95% CI: 0.73–0.86, p < 0.00001), indicating consistent results. The findings suggest that adding MTX can extend the effective duration of bDMARDs in PsA treatment.

Why important?

The study reinforces that MTX enhances drug survival of bDMARDs, particularly TNF inhibitors, in PsA.

Polling Question

Considering this study, would you add methotrexate to potentially increase drug survival of bDMARDs? If yes, only to TNFi or to other classes as well?



Study or Subgroup	log[HR]	SE	Weight	Hazard ratio IV, Random, 95% CI
Aaltonen K et al 2017	-0.198451	0.150413	5.2%	0.82 [0.61 , 1.10]
Ballegaard C et al 2017	0.029559	0.105454	7.6%	1.03 [0.84 , 1.27]
Fagerli K.M et al 2017	-0.105361	0.197246	3.5%	0.90 [0.61 , 1.32]
Fagerli KM et al 2012	-0.34249	0.164257	4.6%	0.71 [0.51 , 0.98]
Favalli E.G et al 2016	-0.433865	0.213831	3.1%	0.65 [0.43 , 0.99]
Flouri et al 2017	-0.494296	0.179776	4.1%	0.61 [0.43 , 0.87]
George et al 2020	-0.210721	0.047085	11.9%	0.81 [0.74 , 0.89]
Glintborg B et al 2010	-0.314711	0.124887	6.4%	0.73 [0.57 , 0.93]
Glintborg B et al 2014	-0.328504	0.090315	8.6%	0.72 [0.60 , 0.86]
Gossec L et al 2022 (TNFi)	-0.314711	0.169056	4.4%	0.73 [0.52 , 1.02]
Gossec L et al 2022 (UST)	0.300105	0.14579	5.4%	1.35 [1.01 , 1.80]
Haddad A et al 2021	-0.18633	0.060159	10.9%	0.83 [0.74 , 0.93]
Heiberg M.S et al 2008	-0.579818	0.209162	3.2%	0.56 [0.37 , 0.84]
Kristensen L.E et al 2008	-0.446287	0.227125	2.9%	0.64 [0.41 , 1.00]
Lindstrom U et al 2021	-0.116534	0.074217	9.8%	0.89 [0.77 , 1.03]
Pombo-Suarez M. et al 2021	-0.105361	0.453619	0.8%	0.90 [0.37 , 2.19]
Saad A et al 2008	-0.446287	0.210891	3.2%	0.64 [0.42 , 0.97]
Sharif K et al 2018	-0.094311	0.396657	1.1%	0.91 [0.42 , 1.98]
Soubrier M et al 2016	-0.162519	0.425313	1.0%	0.85 [0.37 , 1.96]
Stober C et al 2017	0.329304	0.251712	2.4%	1.39 [0.85 , 2.28]
Total (95% CI)			**100.0%**	**0.81 [0.75 , 0.89]**

Heterogeneity: Tau² = 0.01; Chi² = 36.43, df = 19 (P = 0.009); I² = 48%
Test for overall effect: Z = 4.77 (P < 0.00001)
Test for subgroup differences: Not applicable

VUNAKIZUMAB IN PATIENTS WITH ACTIVE PSORIATIC ARTHRITIS: A MULTICENTER, RANDOMIZED, DOUBLE-BLIND, PLACEBO-CONTROLLED, PHASE 2 STUDY

Yu Xue

Monday, November 18, 2024
1:00 PM to 2:30 PM
Abstract # 2581

Full Abstract here

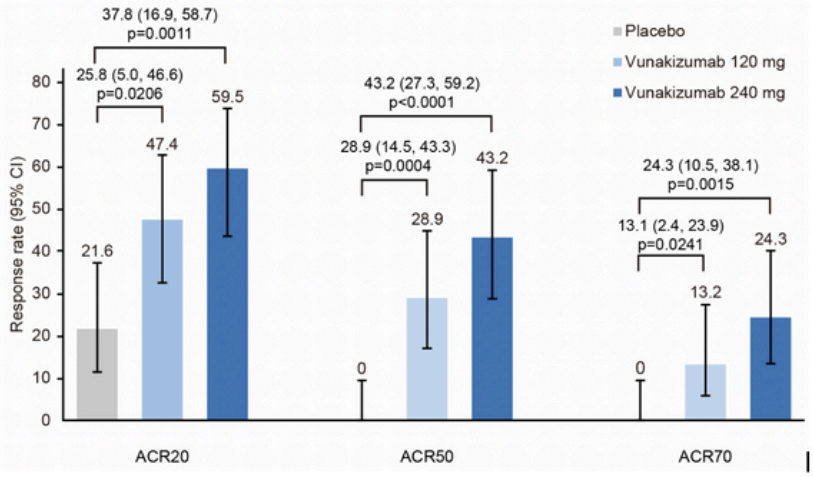
This phase 2, multicenter, double-blind, placebo-controlled trial evaluated Vunakizumab, an anti-IL-17A monoclonal antibody, in 112 adult patients with active PsA. Participants, aged 18-75, had confirmed PsA with active symptoms and were randomized into three groups: Vunakizumab 240 mg, 120 mg, or placebo. The primary endpoint was the ACR20 response at Week 12.
Results showed that 59.5% of patients in the 240 mg group and 47.4% in the 120 mg group achieved ACR20, significantly higher than the 21.6% response in the placebo group (p=0.0011 and p=0.0206, respectively). Secondary outcomes, including ACR50 and ACR70, along with improvements in DAS28-CRP, HAQ-DI, and PASI scores, also favored Vunakizumab over placebo. The treatment was generally well tolerated, with the most common adverse event being upper respiratory tract infections. Only one serious adverse event was reported, deemed unrelated to the treatment.

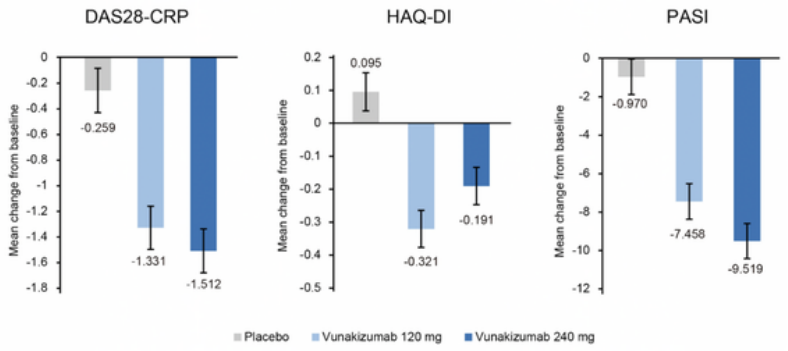
Why important?

This study suggests that Vunakizumab may be added to the growing arsenal of IL-17 inhibitors, showcasing significant skin and joint improvements in PsA.

Polling Question

If Vunakizumab were available today, would you be willing to switch your patients from other IL-17 inhibitors or bDMARDs to try it? What data would convince you to make that change?





TREATMENT HIGHLIGHTS

Yusuf Can Edek, MD
Department of Dermatology, Gazi University Faculty of Medicine, Ankara, Türkiye
Full GRAPPA member, Y-GRAPPA member
Research focus: Immune-mediated skin diseases such as PsA, HS, Vitiligo, and Ultrasound

https://www.linkedin.com/in/yusuf-can-edek-303a95186/

CARDIO-METABOLIC EFFECTS OF APREMILAST IN PATIENTS WITH PSORIATIC ARTHRITIS: A PROSPECTIVE COHORT STUDY

Eva van Geel

Saturday, November 16, 2024
10:30 AM to 12:30 PM
Abstract # 0598

Full Abstract here

Why important?

This study evaluated the cardioprotective effects of apremilast. It is important to understand if and how apremilast can be part of the management of cardiovascular comorbidities in PsA.

Polling Question

Would you use apremilast as a primary treatment option in patients with psoriasis and PsA with cardiovascular disease? Would you prefer apremilast as a treatment option in obese patients?

PsA is associated with metabolic and cardiovascular disease. Studies have suggested that treatment with apremilast is associated with weight loss and other cardio-metabolic benefits. This study aimed to examine the effects of apremilast on weight, body composition and cardiovascular risk factors in patients with PsA.

Abdominal fat levels were evaluated with Dual Energy X-ray Absorptiometry and disease activity with DAS28-CRP. Patients were assessed at 26 and 52 weeks of treatment with apremilast. After one year of treatment, significant reductions were observed in multiple body mass parameters, including a decrease in android fat mass of 1.1 kg (95% CI [-1.7 - -0.5]; p=0.002). Correlation analysis revealed significant correlations between abdominal fat measures and a reduced disease activity, with the strongest correlation for android fat mass (0.309 (95% CI [0.101 - 0.517]; p=0.004). Additionally, weight loss correlated with reduced disease activity.

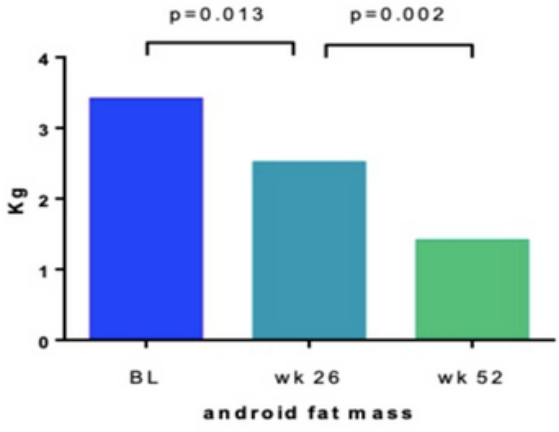


Figure 1. Mean android fat mass.
Mean android fat mass at baseline, week 26 and week 52.

REAL WORLD EFFECTIVENESS OF UPADACITINIB IN PATIENTS WITH PSORIATIC ARTHRITIS PREVIOUSLY TREATED WITH TNF INHIBITORS: DATA FROM THE OM1 REGISTRY

Alexis Ogdie

Saturday, November 16, 2024
10:30 AM-12:30 PM
Abstract # 0586

Full Abstract here

Upadacitinib (UPA), an oral JAK inhibitor, has demonstrated efficacy for the treatment of PsA in randomized controlled trials of patients with inadequate response or intolerance to biologic DMARDs. This study assessed real-world improvement in key clinical and patient-reported outcomes (PROs) among adult patients with PsA initiating UPA after prior experience with a TNF inhibitor. Mean changes from baseline were evaluated at both 3 and 6 months for the following clinical outcomes and PROs: RAPID3, TJC28, SJC28, pain by visual analog scale (VAS: 0-10), fatigue by numeric rating scale (NRS: 0-10), Multi-Dimensional Health Assessment Questionnaire (MDHAQ) Physician Global Assessment (PGA: 0-10), and MDHAQ Patient Global Assessment (PtGA: 0-10).

A total of 535 TNF inhibitor-experienced patients with PsA met the inclusion criteria. At baseline, overall mean ± SD scores were 4.45 ± 2.23 for RAPID3, 5.97 ± 7.15 for TJC28, 3.13 ± 4.56 for SJC28, 5.71 ± 2.62 for pain, 5.95 ± 2.61 for fatigue, 3.54 ± 2.60 for MDHAQ PGA, and 5.21 ± 2.67 for MDHAQ PtGA. At 3 months, significant improvements (all $P < 0.05$) were observed for all the clinical outcomes and PROs: RAPID3 (-0.44 ± 2.02), TJC28 (-1.82 ± 6.09), SJC28 (-0.97 ± 3.29), pain (-0.85 ± 2.48), fatigue (-0.73 ± 2.13), MDHAQ PGA (-0.72 ± 2.39), and MDHAQ PtGA (-0.53 ± 2.62) (Table 2). The improvements at 3 months were maintained at 6 months.

TNF inhibitor-experienced patients with PsA who initiated UPA demonstrated significant and sustained improvements in joint involvement, pain, fatigue, and overall health in real-world clinical practice.

Why important?

This study showed that upadacitinib is an effective treatment option in patients previously treated with TNFi.

Polling Question

Do you think that JAK-STAT signaling pathway inhibitors are effective and safe treatment options for patients with PsA who are resistant to treatments?

REAL WORLD EFFECTIVENESS OF UPADACITINIB IN PATIENTS WITH PSORIATIC ARTHRITIS PREVIOUSLY TREATED WITH TNF INHIBITORS: DATA FROM THE OM1 REGISTRY

Alexis Ogdie et al

Table 1: Baseline Characteristics of TNF Inhibitor-Experienced Patients With PsA Treated With Upadacitinib

Baseline Characteristics	N = 535
Age, mean (SD)	55.2 (12.2)
Age group, n (%)	
18-44	110 (20.6)
45-64	298 (55.7)
65-74	102 (19.1)
75+	25 (4.7)
Sex, n (%)	
Female	388 (72.5)
Male	147 (27.5)
Race, n (%)	
Black	11 (2.3)
White	449 (94.9)
Other race	13 (2.8)
Region, n (%)	
Midwest	66 (12.3)
Northeast	80 (15.0)
South	377 (70.5)
West	12 (2.2)
Payer type, n (%)	
Commercial	375 (72.7)
Medicaid	15 (2.9)
Medicare	126 (24.4)
Baseline Charlson Comorbidity Index score, mean (SD)	1.61 (1.7)
Number of prior TNF inhibitors[a], n (%)	
1	241 (45.0)
2	177 (33.1)
3+	117 (21.9)
Number of prior targeted immune modulators excluding TNF inhibitors[b], n (%)	
0	111 (20.7)
1	134 (25.0)
2	100 (18.7)
3+	190 (35.5)

[a] TNF inhibitors included: adalimumab, certolizumab pegol, etanercept, golimumab, infliximab.
[b] Non-TNF inhibitor targeted immune modulators included: ixekizumab, secukinumab, guselkumab, ustekinumab, tofacitinib, abatacept, apremilast, risankizumab.

Table 2: Mean Change in Clinical and Patient-Reported Outcomes in TNF Inhibitor-Experienced Patients With PsA After Treatment With Upadacitinib

Clinical / PRO Outcome	Baseline Mean (SD) n[b]	3-Month Change Mean (SD) n[c]	*P* value[a]	6-Month Change Mean (SD) n[c]	*P* value[a]
RAPID3 (adjusted) (0-10)	4.45 (2.23) 158	-0.44 (2.02) 118	.0195	--	--
TJC28 (0-28)	5.97 (7.15) 240	-1.82 (6.09) 181	<.0001	-3.07 (6.32) 88	<.0001
SJC28 (0-28)	3.13 (4.56) 240	-0.97 (3.29) 181	.0001	-0.85 (3.85) 88	.0406
Pain VAS (0-10)	5.71 (2.62) 177	-0.85 (2.48) 141	<.0001	-0.75 (2.86) 67	.0349
Fatigue NRS (0-10)	5.95 (2.61) 87	-0.73 (2.13) 64	.0076	--	--
MDHAQ Physician Global Assessment (0-10)	3.54 (2.60) 227	-0.72 (2.39) 172	.0001	-0.95 (2.35) 76	.0007
MDHAQ Patient Global Assessment (0-10)	5.21 (2.67) 274	-0.53 (2.62) 230	.0024	-.0.44 (2.69) 102	.1004

MDHAQ, Multi-Dimensional Health Assessment Questionnaire; NRS; numeric rating scale; PRO, patient-reported outcome UPA, upadacitinib; VAS, visual analogue scale. For outcomes indicated as (--), data not reported due to insufficient sample size as a result of missing data at 6-month follow-up.
[a]Paired *t* test between baseline and follow up score.
[b]Sample size reflects patients with a baseline score for a given outcome.
[c]Sample sizes reported are the number of patients with both a baseline and 3- or 6-month score for a given outcome.

INCIDENCE AND PREDICTORS OF SECONDARY FAILURE TO BIOLOGIC THERAPY IN PATIENTS WITH PSORIATIC ARTHRITIS

Fadi Kharouf

Sunday, November 17, 2024
10:30 AM–12:30 PM
Abstract # 1455

Full Abstract here

Why important?

Secondary biologic failure is common in PsA. A more complete clinical response, use of TNFi, and commencement of first-ever biologic are associated with persistence of therapy.

Polling Question

How can predictors of secondary biologic failure be used in clinical practice?

Secondary failure to biologic therapy is challenging and contributes to the complexity of managing PsA. This study aimed to define the incidence of secondary failure to biologic therapy in patients with PsA and identify factors associated with its occurrence.

Of the 482 patients who commenced treatment with biologics after clinic enrollment, 264 (54.8%) were classified as responders to therapy at one year. 236 (89.4%) responders received tumor necrosis factor inhibitors (TNFi). 94 (35.6%) responders developed secondary biologic failure at a median [IQR] of 2.7 [1.7, 4.8] years. The incidence rate of secondary failure was 5.96 per 100 person-years.

In the reduced multivariate model (Table 1), higher SJC (HR 1.40, p=0.01) and PASI (HR 1.15, p=0.02) at the time of response (1-year point) were associated with the development of secondary failure. The use of TNFi (HR 0.37, p=0.02) and initiation as the first-ever biologic (HR 0.52, p=0.049) were associated with a lower incidence of secondary failure.

Variable~		Univariate model			Multivariate full model			Multivariate reduced model		
		HR	p-value		HR	p-value		HR	p-value	
Calendar year (compared to 2002-2009)	2010-2017	1.07	0.71	0.31	1.00	1.00	**0.04**	1.02	0.93	**0.04**
	2018-2024	0.64	0.24		0.20	**0.048**		0.22	**0.049**	
Age in years^		1.00	0.71		0.99	0.25				
Sex (male/female)		0.81	0.32		0.76	0.24				
Duration of PsA in years^		1.01	0.55		1.02	0.19				
BMI in kg/m^2^		1.04	**0.03**		1.03	0.19				
Fibromyalgia (yes/no)		1.47	0.36		1.51	0.40				
Inflammatory eye disease or IBD (yes/no)		0.82	0.71		1.37	0.58				
SJC^		1.35	**0.03**		1.36	**0.04**		1.40	**0.01**	
PASI^ (0-72)		1.16	**0.01**		1.14	**0.04**		1.15	**0.02**	
Syndesmophytes and/or sacroiliitis (yes/no)		1.06	0.77		0.99	0.97				
Use of conventional synthetic DMARDs (yes/no)		1.36	0.14		1.32	0.23				
TNFi (yes/ no)		0.57	0.07		0.40	**0.03**		0.37	**0.02**	
Use as the first-ever biologic (yes/no)		0.54	**0.02**		0.53	0.06		0.52	**0.049**	

HR, hazard ratio; PsA, psoriatic arthritis; BMI, body mass index; IBD, inflammatory bowel disease; SJC, swollen joint count; PASI, Psoriasis Area and Severity Index; DMARDs: disease-modifying anti-rheumatic drugs; TNFi, tumor necrosis factor inhibitors

~ The response date (assessed at 1 year of drug initiation) is used as the time of origin. All variables are time-varying, except SJC and PASI at the time of origin
^ 1-unit or joint increase

Figure 1. Univariate and multivariate Cox proportional hazards regression analysis of factors associated with secondary biologic failure

Exploring **Psoriatic Disease**:
Key Scientific Sessions and Discussions
at ACR 2024

Friday, November 15

Psoriatic Arthritis Management Review 8:10 AM – 8:45 AM Hall E

Saturday, November 16

16S06: **Proposed ACR Guidance for Use of Musculoskeletal Ultrasound in Rheumatoid and Psoriatic Arthritis.** 9:00 AM – 10:00 AM Room 150AB

16S16: **More Than Skin Deep: What Rheumatologists Should Know About the Skin.** 10:00 AM – 11:00 AM Room 143AB

Plenary I 9:15 AM – 10:45 AM Hall E
0772: "**Global Recruiting Patterns Are Associated with Placebo Response Rates in Clinical Trials of Psoriatic Arthritis"** 10:00 AM – 10:15 AM

Sunday, November 17

17S08: **Sex Differences in Psoriatic Arthritis** 9:00 AM – 10:00 AM Eastern Time Ballroom A

MTP14A: **Meet the Professor: Psoriatic Arthritis** 11:30 AM – 12:30 PM **and** 4:30 PM – 5:30 PM Room 153

Tuesday, November 19

SPARTAN GRAPPA ASAS Educational Symposium on Axial Spondyloarthritis and Psoriatic Arthritis 12:30 PM – 2:30 PM Marriott Marquis, Independence Salons

Times are listed in Eastern Time

Your **PsA Abstract Compass** for ACR 2024

Poster Tours

305: **Spondyloarthritis Including Psoriatic Arthritis – Diagnosis, Manifestations, & Outcomes Poster Tour.** November 16. 10:30 AM – 11:15 AM

318: **Spondyloarthritis Including Psoriatic Arthritis – Diagnosis, Manifestations, & Outcomes Poster Tour** November 17. 10:30 AM – 11:15 AM

Abstracts Sessions

16S55: **Abstracts: SpA Including PsA – Diagnosis, Manifestations, & Outcomes I** (0817–0822) November 16. 1:00 PM – 2:30 PM Room 147AB

17S67: **Abstracts: SpA Including PsA – Basic Science** (1707–1712) November 17. 3:00 PM – 4:30 PM Room 150AB

17S68: **Abstracts: SpA Including PsA – Treatment I** (1755–1760) November 17. 3:00 PM – 4:30 PM Ballroom B

18M60: **Abstracts: SpA Including PsA – Treatment II** (2581–2586) November 18. 1:00 PM – 2:30 PM Ballroom B

18M69: **Abstracts: SpA Including PsA – Diagnosis, Manifestations, & Outcomes II** (2635–2640) November 18. 3:00 PM – 4:30 PM Room 146AB

Times are listed in Eastern Time

Y-GRAPPiANs
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2024 ADJACENT TO ACR

NOVEMBER 17
5:30-7:30PM
WASHINGTON, D.C.

Courtyard/Residence Inn
Washington D.C. Downtown/
Convention Center
Room Shaw A

SPEAKERS INCLUDE:

ARTIE KAVANAUGH
University of California
San Diego School of Medicine
USA

JOSEPH MEROLA
UT Southwestern
USA

VINOD CHANDRAN
University of Toronto
Canada

ELAINE HUSNI
Cleveland Clinic
USA

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Hospital Italiano de Buenos Aires
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Educational Symposium on
Axial Spondyloarthritis and Psoriatic Arthritis
Tuesday, November 19, 2024 | 12:20 - 2:30 PM
Marriott Marquis, Washington DC—Independence Ballroom–Level M4
Moderated by Mohamad Bittar and Marina Magrey
CLEMENTINA LÓPEZ-MEDINA
Hospital Universitario Reina Sofia
Spain
SHIKHA SINGLA
Medical College of Wisconsin
USA
LAURE GOSSEC
Sorbonne Universite
France
LIANNE GENSLER
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GRAPPA
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ACR 2024
of psoriatic disease
ONLINE EVENT
REGISTRATION REQUIRED
SCAN ME
Wednesday
December 4th
10:00-11:30 AM EDT
4:00-5:30 PM CEST
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