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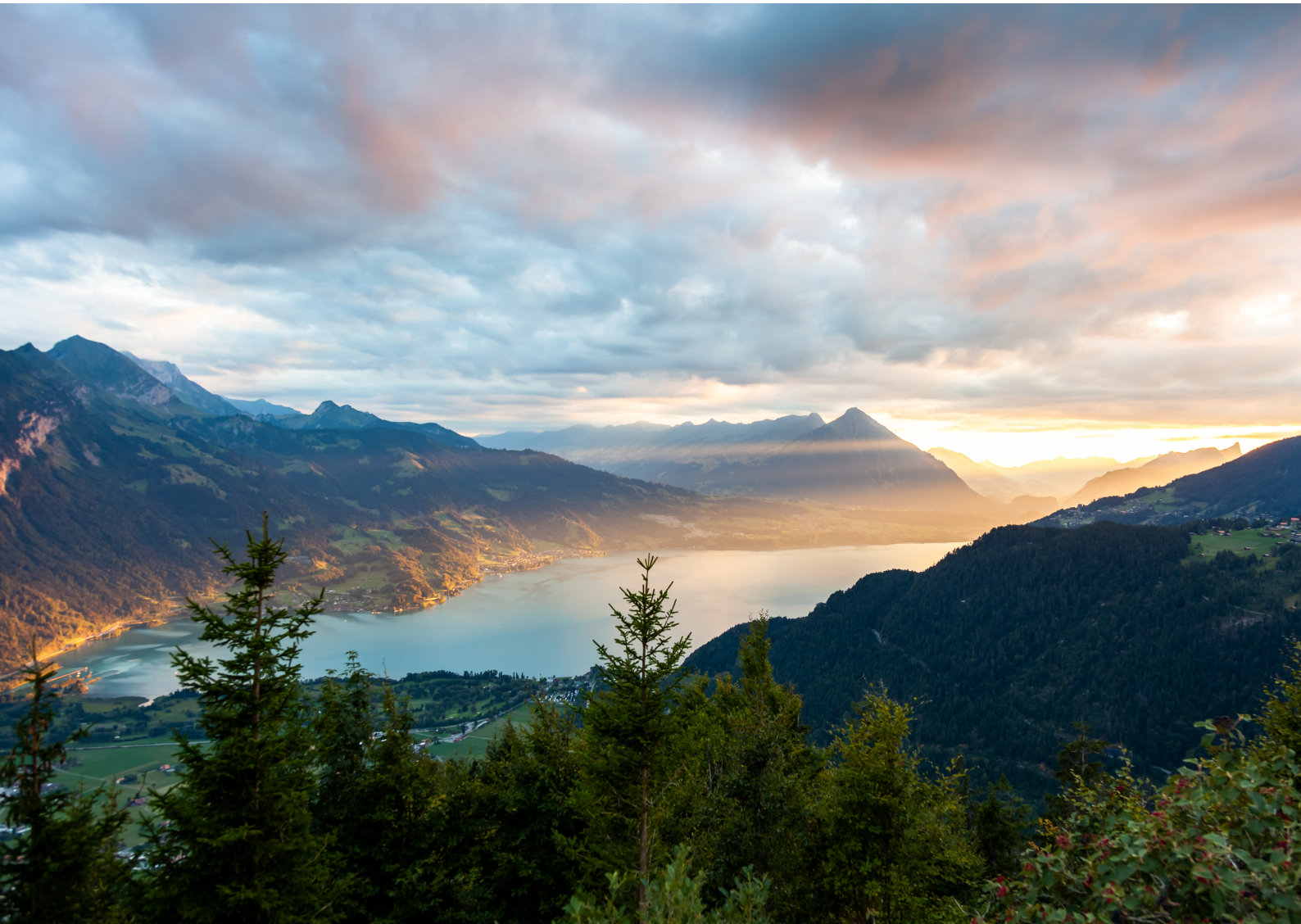

ANNUAL MEETING OF THE SWISS SOCIETY OF RHEUMATOLOGY

INTERLAKEN, SEPTEMBER 4–5, 2025

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BEST ABSTRACTS

BA 1

Anti-Ro/SSA+/RF+ double seropositivity in SSc is associated with more severe SSc-ILD: a study from the EUSTAR database

Burja B[1], Boubaya M[2], Bruni C[1], E. Carreira P[3], Bergmann C[4], P. Ananyeva L[5], Riemerkasten G[6], Masado O[7], De Vries-Bouwstra J[8], Rosato E[9], Truchetet M[10], Del Papa N[11], Marcoccia A[12], Atzeni F[13], Schmeiser T[14], Vonk M[15], Del Galdo F[16], Distler O[1], Elhai M[1]

[1]Department of Rheumatology, University Hospital Zurich, University of Zurich, Zurich, Switzerland; [2]Department of Clinical Research, CHU Avicenne, APHP, Bobigny, France; [3]Rheumatology Department, Hospital Universitario 12 De Octubre, Madrid, Spain; [4]Department Internal Medicine, University Hospital Erlangen, Germany; [5]V.A. Nasonova Research Institute Of Rheumatology Russian Federation, Moscow, Russia; [6]Department of Rheumatology and Clinical Immunology, University Clinic Schleswig-Holstein, Lübeck, Germany; [7]; [8]St.Luke's International Hospital Immuno-Rheumatology Center, Tokyo, Japan; [9]Department Of Rheumatology, Leiden University Medical Center, Netherlands; [10]Sapienza University Of Rome-Department Of Translational And Precision Medicine, Rome, Italy; [11]Chu De Bordeaux, Rheumatology Department, Bordeaux, France; [12]Scleroderma Clinic, UOC Reumatologia Clinica, ASST G. Pini-CTO, Milano, Italy; [13]Centro Di Riferimento Interdisciplinare Per La Sclerosi Sistemica, Rome, Italy; [14]Rheumatology Unit, University Of Messina, Italy; [15]Krankenhaus St. Josef, Wuppertal-Elberfeld, Germany; [16]Department of Rheumatology, Radbound University Medical Centre, Nijmegen, Nederlands; [17]Leeds Institute of Rheumatic and Musculoskeletal Medicine, Faculty of Medicine and Health, University of Leeds, Leeds, UK

Background: The large patient heterogeneity and the unpredictable prognosis of patients with SSc-ILD highlight the need for better risk-stratification. SSc-non-specific antibodies might better delineate the clinical phenotypes.

Objective: We aimed to evaluate the prevalence of anti-Ro/SSA and RF antibodies in the largest available cohort of established SSc patients and characterize disease phenotype and clinical outcomes of the anti-Ro/SSA+/RF+ SSc subpopulation, focusing on lung involvement.

Methods: Patients from the EUSTAR database fulfilling the 2013 classification criteria for SSc, with available data on anti-Ro/SSA and RF antibodies, were included. Clinical characteristics of patients with or without anti-Ro/SSA and RF antibodies were compared at baseline. The presence of ILD on HRCT was assessed over the follow-up. Multivariable logistic regression models were built to identify factors associated with ILD. Prognostic factors for the ILD progression and death during follow-up were tested by multivariable Cox proportional hazards regression. Covariates were selected according to literature evidence. Multiple imputation was used to impute missing data in these models.

Results: Among the total 3'406 patients, 364 (10.7%) and 409 (12%) patients were positive for anti-Ro/SSA and RF, respectively, while 143 (4.1%) had double-positive anti-Ro/SSA and RF status. Patients with anti-Ro/SSA+ and RF+ had a higher prevalence of joint synovitis (p <0.001), muscular involvement (p <0.001), and pulmonary hypertension according to echocardiography (p = 0.007) as compared to other groups. Importantly, they had a higher prevalence of ILD at baseline (57.3%; p value = 0.03) as compared to single positive or negative anti-Ro/SSA and RF status. Multivariable logistic regression analysis over a median follow-up of 2.7 years with recorded 14'066 visits confirmed the higher cumulative independent risk of patients with RF and anti-Ro/SSA double positivity for presence of ILD (OR 1.34; p-value = 0.003). Moreover, in this double positive subpopulation, ILD presented a more severe phenotype with lower FVC% (R -4.64; p = 0.041) and lower DLCO% (R -4.96; p = 0.004).

Conclusion: In the large EUSTAR cohort, anti-Ro/SSA+RF+ seropositivity represents a cumulative independent risk factor for higher occurrence and more severe SSc-ILD. These data support the inclusion of RF in addition to anti-Ro/SSA antibodies in routine clinical practice to improve the risk-stratification of SSc-ILD patients.

BA 2

Synovial fibroblasts, macrophages and dendritic cells form an inflammatory niche in rheumatoid arthritis, but not in psoriatic arthritis synovium.

Khmelevskaya A[1], Houtman M[1], Buerki K[1], Pauli C[2], Distler O[1], Ciurea A[1], Ramming A[3], Fearon U[4], Ospelt C[1], Micheroli R[1]

[1]Center of Experimental Rheumatology, Department of Rheumatology, University Hospital Zurich, University of Zurich, Zurich, Switzerland; [2]Department of Pathology, University Hospital Zurich, University of Zurich, Zurich, Switzerland; [3]Department of Internal Medicine, Rheumatology & Immunology, Friedrich-Alexander-University (FAU) Erlangen-Nürnberg and University Hospital Erlangen, Erlangen, Germany; [4]Molecular Rheumatology, School of Medicine, Trinity Biomedical Sciences Institute, Trinity College Dublin, Dublin, Ireland

Background: In active rheumatoid arthritis (RA), a macrophage-rich lining-layer was shown to be populated with inflammatory dendritic cells (iDC3) that promote synovitis [1]. However, the stromal compartment which may drive iDCs niche formation was not identified.

Objectives: To characterize interactions between synovial fibroblasts and iDC3 in RA and compare them with other joint diseases.

Methods: Synovial biopsies were collected from inflamed joints of 15 RA, 12 PsA, 5 undifferentiated arthritis (UA), and 5 osteoarthritis (OA) patients. Six trauma (TRA) patients served as controls. Single-cell RNA sequencing (scRNAseq) was performed on dissociated synovial cells and PBMCs from additional RA (n = 5) and PsA (n = 6) patients. In total, 217,109 cells (180,473 synovial and 36,636 blood cells) were analyzed using Seurat and STACAS. Cell-cell interactions were predicted using MultiNicheNet and CellChat. Four additional synovial biopsies (2 RA, 1 PsA, 1 OA) underwent spatial transcriptomics. STutility and UCell were used for analysis.

Results: Myeloid cells and fibroblasts were the most abundant synovial cell types (27% and 33%, respectively), while dendritic cells (DCs) made up 1.5%. DC interactions were enriched in RA compared to PsA and controls. Among DC subsets, a FABP5+ iDC3 population received the most interactions, primarily from CHI3L1+ fibroblasts and MerTK-SPP1+ macrophages. CHI3L1+ fibroblasts were previously shown to be more prevalent in RA than in PsA, OA, or controls [2]. SPP1+ macrophages mainly engaged in cell-cell contact interactions, whereas CHI3L1+ fibroblasts utilized secreted signaling and ECM-receptor mechanisms. Spatial transcriptomics confirmed the presence of FABP5+ iDC3 clusters closely surrounded by SPP1+ macrophages in RA, but not in PsA or OA. Ligand-receptor pairs involved in contact-dependent signaling (e.g., SPP1-CD44, ITGB2-ICAM1) showed higher expression near FABP5+ iDC3 regions. CHI3L1 expression did not correlate with proximity to iDC3 clusters, supporting its role in non-contact signaling.

Conclusion: Our findings reveal a disease-specific interaction network in RA involving FABP5+ iDC3, CHI3L1+ fibroblasts, and SPP1+ macrophages. These interactions may establish a pro-inflammatory niche that contributes to persistent synovitis in RA.

References:

1 - MacDonald et al., 2024, Immunity
2 - Khmelevskaya et al., 2024, Ann Rheum Dis

BA 3

Cancer incidence among rheumatoid arthritis patients treated with JAK-inhibitors compared to bDMARDs: data from an international collaboration of registers (the "JAK-pot" study)

Aymon R[1], Mongin D[1], Gilbert B[1], Guemara R[1], Choquette D[2], Codreanu C[3], Coupal L[2], Flouri I[4], Fritsch-Stork R[5,6], Giacomelli R[8], Huschek D[7], Iannone F[8], Kvien TK[9], Otero-Valera L[10], Nordström D[11], Pavelka K[12], Pombo-Suarez M[13], Provan SA[9,14], Rotar Z[15], Sidiropoulos P[4,16], Vieira-Sousa E[17], Strangfeld A[7], Zavada J[12,18], Courvoisier DS[1], Finckh A[1], Lauper K[1]

[1]Geneva University Hospitals, Division of Rheumatology, Geneva, Switzerland; [2]CHUM, Institut de Recherche en Rhumatologie, Montréal, Canada; [3]University of Medicine, Center of Rheumatic Diseases, Bucharest, Romania; [4]University Hospital of Heraklion, Rheumatology, Clinical Immunology and Allergy, Crete, Greece; [5]Sigmund Freud University, Vienna, Austria; [6]Health Care Center Mariahilf, OEGK, Vienna, Austria; [7]German Rheumatology Research Center (DRFZ), Berlin, Germany; [8]University Hospital of Bari, GISEA, Rheumatology, Bari, Italy; [9]Diakonhjemmet Hospital, Centre for Treatment of Rheumatic and Musculoskeletal Diseases (REMEDY), Oslo,Norway; [10]; [11]Spanish Society of Rheumatology, Research Unit, Madrid, Spain; [12]Helsinki University Hospital, ROBFIN, Helsinki, Finland; [13]Institute of Rheumatology, Rheumatology, Prague, Czech Republic; [14]Hospital Clinico Universitario, Rheumatology, Santiago de Compostela, Spain; [15]University of Inland Norway, Department of Public Health and Sport Sciences, Norway, Norway; [16]University Medical Centre Ljubljana & Faculty of Medicine, University of Ljubljana, Institute of Rheumatology, Ljubjana, Slovenia; [17]Institute of Molecular Biology and Biotechnology, FORTH, Heraklion, Greece; [18]; [19]Reuma.pt, Sociedade Portuguesa de Reumatologia, Lisbon, Portugal; [20]First Faculty of Medicine, Charles University, Department of Rheumatology, Prague, Czech Republic

Background: Regulatory authorities issued precautionary recommendations on the use of Janus kinase inhibitors (JAKi) following the ORAL Surveillance trial, which demonstrated an elevated risk of cancer with tofacitinib, compared to TNF inhibitors (TNFi). While these findings have influenced clinical guidance, there is still limited real-world evidence on malignancy risks associated with JAKi treatment.

Objectives: To assess the incidence of cancer in rheumatoid arthritis (RA) patients treated with JAKi, compared to other biologic disease modifying anti-rheumatic drugs (bDMARDs), using data from a large, multi-country, real-world population.

Methods: We studied patients from 13 RA registers across Europe and Québec, starting JAKi, TNFi -inhibitors (TNFi) or bDMARDs with other modes of action (OMA). Outcomes of interest were categorized into cancer excluding non-melanoma skin cancer (NMSC); and NMSC cases. Cancers were linked to treatments within 5 years of cessation or until follow-up loss, death, or study end, whichever came first. Incidence rates (IR) per 100 patient-years (PY) with 95% confidence intervals (CI) were computed. Poisson regression, with propensity score weighting (including country, disease-, and patient-characteristics, and comorbidities), was used to obtain adjusted incidence rate ratios (aIRR), with 95% CI.

Results: Over the 53'169 treatment initiations considered in 33'127 patients, 638 cancers excluding NMSC and 219 NMSC were reported. Crude incidence of cancer excluding NMSC was lower for TNFi (2.2/1000 PY) than for JAKi (2.9/1000 PY) and OMA (3.1/1000 PY). The adjusted Poisson regression found no significant difference in the incidence of cancer excluding NMSC (aIRR = 1.10 ; 95% CI [0.89; 1.37]) or NMSC (aIRR = 1.12 ; 95% CI [0.78; 1.60]) between JAKi and TNFi, nor between JAKi and OMA (aIRR = 1.07 ; 95% CI [0.86; 1.32] and aIRR = 0.79 ; 95% CI [0.54; 1.15] respectively).

Conclusion: In this real-world study, including 13 RA registers and all currently available JAKi, we did not find a significantly higher risk of cancer excluding NMSC or of NMSC in RA patients treated with JAKi compared to bDMARDs (TNFi or OMA). Further analyses are planned, including at-risk population analysis, the inclusion of additional registries to enhance statistical power and the evaluation of incidence across different exposure periods.

BEST CASES

BC 1

VEXAS Syndrome: Successful Treatment with Allogeneic Hematopoietic Stem Cell Transplantation

Rubeli S[1], Merki R[2], Daikeler T[3], Halter J[4], Adler S[1]

[1]Department of Rheumatology and Immunology, University Department of Medicine, Kantonsspital Aarau, Switzerland; [2]Department of Hematology and Oncology, Kantonsspital Luzern, Switzerland; [3]Department of Rheumatology and Immunology, University Hospital Basel, Switzerland; [4]Department of Hematology, University Hospital Basel, Switzerland

Introduction: VEXAS (vacuoles, E1 enzyme, X-linked, autoinflammatory, somatic) syndrome is a clonal disorder of hematopoietic stem cells that manifest as a systemic inflammatory condition and can progress to myelodysplastic syndrome (1). Treatment is primarily symptomatic and may involve therapies such as corticosteroids, IL-1 or IL-6 blockade and JAK inhibitors (2). For patients with severe disease who show poor response to anti-inflammatory therapies, allogeneic hematopoietic stem cell transplantation (allo-HSCT) may offer a potentially curative approach (3).

Patient and therapy: A 60-year-old man presented with a Sweet syndrome (neutrophilic dermatosis, picture A, B), a seronegative symmetrical polyarthritis and a progressive macrocytic anemia. Oral anticoagulation was installed due to pulmonary embolism and deep vein thrombosis. PET-CT scan showed intensive FDG-uptake of the entire skeletal bone marrow, generalized lymphadenopathy and a chondritis of the nose (picture C, D). The bone marrow aspirate showed dysplastic changes and vacuoles in the myeloid precursor cells (picture E). Genetic analysis found a somatic mutation affecting methionine-41 in the gene UBA1 on X chromosome, confirming VEXAS syndrome. The course of the disease was progressive, highly steroid dependent and refractory against various anti-inflammatory therapies, including IL-1, IL-6 blockade and a JAK inhibitor. The anticoagulation regiment was changed to low-molecular-weight heparin due to recurrent pulmonary embolism. Considering the progressive therapy-refractory course, the patient was prepared for allo-HSCT. After standard chemotherapy conditioning, the allo-HSCT was successfully performed from a 12/12 HLA-identic donor. The follow-up was complicated with a mild to moderate chronic graft-versus-host disease of the skin and the upper gastrointestinal system. Clinically, no signs of VEXAS were observed 17 months after transplantation and the bone marrow aspirate showed morphologic and molecular complete remission.

Conclusion: So far, allo-HSCT is the only curative therapeutic approach in VEXAS and should be considered for patients with

severe disease who show poor response to anti-inflammatory therapies. However, the risks associated with allo-HSCT must be carefully balanced against its potential benefits. The timing of transplantation is crucial, as the procedure is most effective when performed before irreversible organ damage develops.

BC 2

Complement factor B inhibition as additional treatment option for Scleroderma renal crisis

Schmiedeberg K[1,2], Binet I[3], Rottländer Y[1], Ackermann C[1], Förger F[1], Rubbert-Roth A[1]

[1]Division of Rheumatology and Immunology, Cantonal Hospital St. Gallen, St. Gallen, Switzerland; [2]University Hospital Bern, Department of Rheumatology and Immunology, Bern, Switzerland; [3]Department of Nephrology and Transplantation Medicine, Cantonal Hospital St. Gallen, St. Gallen, Switzerland

Background: Scleroderma renal crisis (SRC) represents a rare, but potentially life-threatening complication of systemic sclerosis (SSc). Complement activation may represent one of the pathogenetic pathways involved in SRC.1 Iptacopan is an orally administered inhibitor of complement factor B that reduces complement-mediated cell lysis and has recently been demonstrated to reduce proteinuria in adults with primary immunoglobulin A nephropathy.

Case presentation: SSc was initially diagnosed in a 55-year-old Caucasian woman in 2012 when she presented with puffy fingers, Raynaud`s syndrome, skin sclerosis, calcinosis, teleangiectasias, polyarthritis and gastrointestinal involvement with esophageal motility disturbances and ILD. Initially, ANA of 1:2560 and antibodies to CENP-A/B and RNP were noted. Her medication included bosentan since 2012 and methotrexate since April 2023 that was stopped in June 2023 because of a sudden creatinine increase and arterial hypertension (200/100 mmHg). In November 2023, a kidney biopsy revealed a thrombotic microangiopathy (TMA) (normal ADAMTS13 activity) and a membranoproliferative glomerulonephritis in line with the suspected diagnosis of SRC. Progressive kidney disease stage G4-5 A3 according to KDIGO (eGFR (Cystatin C) 16 mL/min/1.73m2), creatinine 250 µmol/L, and proteinuria of 1.3 g/day developed. As an increasing risk for declining kidney function was perceived, we decided to add iptacopan to ongoing treatment with mycophenolate, bosentan and lisinopril. A rapid normalization of proteinuria with stabilization of kidney function (creatinine 190 µmol/l, eGFR 20 mL/min/1.73m2) was observed and this treatment regimen has been continued for 5 months

Learing points for clinical practice: We report on a case of SRC with biopsy proven TMA and membranoproliferative glomerulonephritis and continuous deterioration of renal function despite ongoing treatment with MMF, bosentan and ACE inhibitors. Treatment with the complement factor B inhibitor iptacopan was able to normalize proteinuria and stabilize renal function. This case suggests that pathomechanistic pathways in SRC may involve complement factor B activation similar to IgA nephropathy. Given the poor prognosis of SRC, iptacopan may represent a potential attractive treatment option.

Reference

Cole Aet al, 2023. Clin Rev Allergy Immunol 64: 378-91

BC 3

Recurrent Inflammation and Impaired Immune Defense: The Dual Facets of a Clinical Enigma

Schläpfer-Pessina A[1], Dumusc A[1], Candotti F[2], Ribi C[2], Ammann S[2]

[1]Department of Rheumatology, CHUV, Lausanne; [2]Department of Allergology and Immunology, CHUV, Lausanne

This is a 35-year-old woman with a history of recurrent tonsillitis, bronchitis, upper respiratory infections, childhood fevers with arthralgia and bipolar aphthosis. She had lymphopenia attributed to a CMV infection in July 2022, and an hidradenitis suppurativa.

In February 2022, she presented to rheumatology with diffuse arthralgia. Exam revealed oligoarthritis (right wrist and ankle) and axillary/inguinal abscesses. Ultrasound showed grade I synovitis in both wrists and significant tenosynovitis in anterior/posterior tibial and peroneal tendons. Lab results showed inflammatory syndrome and leukopenia with lymphopenia (CRP 60 mg/L, ESR 38 mm/h, WBC 3.7 G/L, lymphocytes 0.4 G/L). Infectious and autoimmune panels were negative. Calcium, ACE, and IL-2R levels were normal. HLA-B27 was negative; HLA-B51 was positive. MRI of the spine and pelvis ruled out spondyloarthritis. Behçet's disease with hidradenitis suppurativa was diagnosed. Colchicine and NSAIDs improved aphthosis and partially reduced joint pain. Lymphocyte immunophenotyping revealed low T CD4, T CD8, T reg and decreased total and switched memory B cells. IgG2 and IgG4 subclasses were low. However, polysaccharide and protein vaccine responses were preserved. These results were compatible with a combined immunodeficiency although no severe infections were noted. A CT scan revealed bilateral lymphadenopathy, pulmonary nodules, and splenomegaly. Bronchoalveolar lavage showed 22% lymphocytosis with normal CD4/CD8 ratio. Cultures were negative. Exome sequencing identified a heterozygous TNFAIP3, c.547>T mutation, leading to the diagnosis of A20 haploinsufficiency (HA20), a rare autosomal dominant autoinflammatory disease due to impaired NF-κB regulation. Clinically, HA20 often presents with episodic fever, bipolar aphthosis, folliculitis, and may mimic Behçet's, Crohn's, or lupus. Autoimmune markers may be present but were absent here. Diagnosis often occurs in adulthood, though symptoms usually begin in early life. Treatment is not standardized. For this patient, adalimumab 80 mg bimonthly combined with colchicine led to near-complete resolution of abscesses, aphthosis, and joint pain. No infections have occurred since treatment initiation. Immunodeficiency is a rare manifestation of HA20 and, in this patient, the puzzling finding of significant lymphopenia in the setting a rheumatological presentation suggesting Behçet's disease motivated genetic investigations that led to the definitive diagnosis.

BC 4

Opening the vasculitis barrel – A case report

Brennecke F[1], Rubeli S[1], Finkener S[2], Adler S[1]

[1]Department of Rheumatology and Immunology, University Department of Medicine, Kantonsspital Aarau, Switzerland; [2]Department of Neurology, University Department of Medicine, Kantonsspital Aarau, Switzerland

Introduction: Sudden bilateral paresis of the upper extremities is termed person-(man)-in-the-barrel-syndrome was first described in 1969 for bilateral brachial diplegia, resembling a person trapped in a barrel (1) and may represent a neurological challenge. Although resembling polymyalgia rheumatica (PMR) its signs and symptoms mostly outweigh those of a classical PMR by far. The underlying conditions are various, including inflammatory, neoplastic and vascular causes. History, clinical presentation and imaging techniques may help in interdisciplinary diagnosing this rare condition.

Patient and therapy: This 72-years-old female presented with a one-week history of bilateral flaccid proximal arm paresis (left > right), jaw claudication, scalp tenderness, and transient left-sided visual disturbances with additional signs of polymyalgia rheumatica. Neurological examination showed no cranial nerve deficits but confirmed a proximal paresis of both upper limbs. Laboratory investigations revealed a CRP of 169mg/L, and ESR of 120mm/h. Shoulder ultrasound revealed only minor peritendinous fluid collection around the right long head of the biceps tendon, not sufficiently explaining the paresis. Finally, color-coded ultrasound of the temporal arteries as well as magnetic resonance imaging of the aortic arch revealed clear manifestations of giant cell arteritis. CT angiography of the head and cervical spine showed no intracranial pathology. ENMG indicated a partial brachial plexopathy affecting the upper trunks.

Results: Paresis and cranial symptoms ameliorated after the first of three i.v. boluses of 500mg methylprednisolone with concurrent reduction of serologic inflammation during the ongoing tapering of glucocorticoids.

Conclusion: Giant cell arteritis may present with atypical ischemic manifestations (2). Differential diagnosis of upper extremities` paresis may include immunological reasons and lead to vasculitis work-up especially when presenting with cranial symptoms that are otherwise unexplained. We propose an additional ischemic lesion of the brachial plexus C5/C6 due to underlying large vessel vasculitis.

BC 5

BiTE-ing refractory anti-synthetase syndrome

Rottländer Y[1], Launer H[2], Lehmann Th[2], Schmiedeberg K[1,3], Förger F[1,3], Rubbert-Roth A[1]

[1]Department of Rheumatology, Cantonal Hospital St. Gallen, St. Gallen, Switzerland; [2]Department of Oncology and Hematology, Cantonal Hospital St Gallen, St Gallen, Switzerland; [3]University Hospital Bern, Department of Rheumatology and Immunology, Bern, Switzerland

Background: Anti-synthetase syndrome (ASSD) represents an autoimmune disease characterized by autoantibodies directed against one of many aminoacyl transfer RNA (tRNA) synthetases. Clinical features may include myositis, arthritis, and interstitial lung disease (ILD) that is often rapidly progressive. Corticosteroids are frequently used as first-line agents, but ILD and myositis often require additional immunosuppressives including azathioprine, cyclophosphamide, mycophenolate mofetil (MMF), calcineurin inhibitors andrituximab. More recently, successful treatment with CD19-targeted CAR-T cells has been reported in refractory patients and underlines the critical importance of B cells in disease pathogenesis.1

Case presentation: A 47-year-old female patient was diagnosed with ASSD (PL7, SSA positive and hypergammaglobulinemia) when she presented with myositis (initial CK > 4000 U/L), ILD, arthritis, pericarditis, and fever in August 2022. Initial treatment included glucocorticoids and monthly cyclophosphamide at 15mg/kg until January 2023. A first relapse occurred in February 2023 when plasmapheresis and rituximab were initiated, followed by MMF and tacrolimus. A second relapse occurred in June 2024, but myositis was refractory to plasmapheresis and rituximab.

Blinatumomab is a bispecific antibody construct (BiTE) that engages T cells with B cells by binding CD3, a chain of the T cell receptor and CD19, consecutively leading to destruction of CD19+ B cells.2 MMF and tacrolimus were stopped and blinatumomab was applied at a daily dose of 9 µg intravenously over 5 days. A rapid decrease of CK was observed but increased again few days later.

MMF and tacrolimus were restarted and a second course of blinatumomab 9µg/day over 5days was restarted and lead to a temporary decrease of CK and complete depletion of peripheral B cells. A third course of blinatumomab at 28µg/day over 5 days was applied and was associated with an ICANS grade 4 and CRS grade 1 that resolved with a brief course of dexamethasone. CK and hypergamma-globulinemia normalized while reappearance of peripheral B cells was noted. Since then, the patient remained in clinical remission on MMF while GC and tacrolimus were successfully stopped.

In summary, BiTEs may represent a feasible and promising treatment option for refractory ASSD and potential other autoantibody-mediated rheumatic diseases.

References

1. Taubmann J et al 2024
2. Bucci L et al 2024

BC 6

Another chameleon: when symptoms mislead

Dudler M[1], Ahmanna Chakir F[1], Dudler J[1]

[1]Department of Rheumatology, HFR Fribourg Hospital, Switzerland

We report a case of a 49-year-old male with type 1 diabetes and a history of chronic alcohol consumption, who presented with a history of two-month inflammatory low back pain, and one-month swelling of his right wrist. Additionally, he experienced fatigue, 12 kg weight loss and painful red eyes with blurry vision in his right eye. He also presented a month prior a non-pruritic maculopapular rash on his trunk that resolved spontaneously. The patient denied any recent infections, and had not travelled in the past couple of months. He reported having unprotected sex with his wife, and denied any extra conjugal sexual contact.

On clinical examination, arthritis of right wrist and 4th and 5th MCP joints was noted, as well as conjunctival hyperemia in both eyes. Nail examination found onycholysis and oil spots without other signs of psoriasis.

Laboratory tests showed elevated inflammatory markers (CRP 22 mg/L, ESR 77 mm/h) and liver enzymes, likely due to analgesic overuse. HIV, hepatitis screening, and PCR tests for Chlamydia trachomatis and Neisseria gonorrhoeae were negative. HLA-B27 was absent.

Ophthalmology consultation revealed right anterior and posterior uveitis and left posterior uveitis. An MRI of the lumbar spine and sacroiliac joints did not show any inflammatory lesions.

Topical corticosteroids resolved the anterior uveitis, but the posterior uveitis persisted. Additional investigations, including ANA, DOT for connective tissue diseases, chest X-ray, calcemia, ACE levels and Lyme serology were normal.

Empirical treatment with golimumab was initiated for possible spondyloarthropathy.

At follow-up, a couple days later, decrease visual acuity, bilateral papilledema, and right maculopathy was observed. Orbital and cerebral MRI was normal. Despite treatment, ocular lesions progressed and the patient was hospitalized for systemic corticosteroid therapy and lumbar puncture.

Ultimately, a diagnosis of secondary syphilis was made with a highly positive TPHA and VDRL, despite persisting denial of any risky sexual behavior. Both ocular and osteoarticular manifestations improved rapidly with antibiotic therapy.

This case underscores the importance of systematically considering syphilis in the differential diagnosis of uveitis (whether anterior, posterior, or panuveitis), even in the absence of any history of sexual contact. It also highlights the variety of presenting symptoms of syphilis, including a clinical presentation resembling spondylarthropathy.

ORAL ABSTRACT PRESENTATION

OP 1

Precision-cut tissue slices from salivary glands (PCGS) – a potential ex vivo model for Sjögren's disease

Roceri M[1], Guggisberg D[1,2], Seydoux E[1,3], Brunner M[1,2], Klein K[1,2]

[1]Department for BioMedical Research, Bern, Switzerland; [2]Department of Rheumatology and Immunology, Inselspital, Bern University Hospital, University of Bern, Bern, Switzerland; [3]Division of Pediatric Respiratory Medicine and Allergology, Inselspital, Bern University Hospital, Bern, Switzerland;

Background: Sjögren's disease (SjD) is an understudied heterogenous autoimmune disease with limited therapy options. Major challenges in drug development and clinical management are patient heterogeneity and knowledge gaps regarding underlying pathophysiological mechanisms. Relevant models that reflect the complexity of SjD and the cellular heterogeneity of the tissue are still largely missing.

Objective: To establish precision-cut tissue slices from salivary glands (PCGS) as a complex ex vivo model that retains cell-cell communication in the 3D environment.

Methods: Murine submandibular glands were embedded in 3% low-gelation temperature agarose and sliced into 200 µM sections using the Compresstome vibrating microtome (Precisionary). PCGS were cultured in 6 well plates for one to seven days. We have tested medium optimized for salivary gland epithelial cells, fibroblasts and organoids. The viability of PCGS was evaluated by TUNEL assays, the overall tissue architecture was assessed by H&E staining. Immunofluorescence staining of fresh salivary gland tissues and PCGS with anti- E-cadherin (epithelial cells), anti-keratin 5 (myoepithelial and basal duct cells), and DAPI (nuclei) was used to identify specific cell types. PCGS were stimulated with poly(I:C) (10 µg/ml), LPS (100 ng/ml), IL1 (1 ng/ml), and TNF (10 ng/ml) for 24h. RNA expression was evaluated by Real-time PCR. Protein secretion was measured by ELISA and normalized to RNA or protein content, respectively, of slices.

Results: The critical phase for PCGS establishment was the first 24h, irrespective of cell culture conditions. H&E staining reflected results from TUNEL assays and affirmed that establishment of PCGS with high viability was feasible. Immunofluorescence staining confirmed the presence of different cell types in PCGS. Culturing PCGS over time led to a more dense overall tissue architecture irrespective of which medium was used. However, the secretory function of PCGS was maintained over time, as indicated by accumulating levels of IL6, measured at days 2, 5 and 7 after culturing. IL6 secretion was induced by all pro-inflammatory stimuli measured at days 2 and 5 after stimulation. Furthermore, stimulation with poly(I:C) induced levels of CXCL1 and CCL2, measured by Real-time PCR and ELISA, respectively.

Conclusions: PCGS are responsive to pro-inflammatory stimuli. Murine PCGS are the first step towards the development of human PCGS from minor salivary gland tissues of patients with SjD.

OP 2

Profiling Synovial Fibroblast Morphological Signatures for Drug Discovery

Laphanuwat P[1], Camarillo-Retamosa E[1], Seiler C[2,3], Ospelt C[1]

[1]Center of Experimental Rheumatology, Department of Rheumatology, University Hospital Zurich, University of Zurich, Zurich, Switzerland.; [2]; [3]Department of Advanced Computing Sciences, Maastricht University, Maastricht, The Netherlands.; [4]Mathematics Centre Maastricht, Maastricht University, Maastricht, The Netherlands.

Background: Synovial fibroblasts play a central role in the pathogenesis of rheumatoid arthritis (RA), contributing to joint damage through persistent activation and crosstalk within the joint microenvironment. Targeting these cells represents a promising therapeutic strategy. However, no preclinical high-throughput system exists to evaluate drug effects on activated synovial fibroblasts. High-content imaging (HCI) offers a powerful platform for phenotypic profiling and functional analysis.

Objectives: To assess whether HCI combined with machine learning can capture detailed morphological profiles of synovial fibroblasts and serve as a tool to detect drug- or stimulus-induced changes.

Methods: Synovial fibroblasts were obtained from matched RA and OA donors (n = 8 each, shoulder joints). A modified Cell Painting protocol was used to stain key cellular structures, including the nucleus, mitochondria, ER, actin cytoskeleton, Golgi, plasma membrane, and RNA. Images were acquired using the CellInsight™ CX7 system, and ~1,200 features were extracted via CellProfiler. Validation involved senescence induction in skin and OA fibroblasts via X-ray (10 Gy). Cells were also stimulated with cytokines (IFNα, IL1, TNF) or TLR ligands (LPS, PIC), and treated with drugs targeting cellular structures (cycloheximide, MG132, parbendazole, camptothecin, paclitaxel) with/without IL1. DMSO served as control. Data were split into matched training and test sets. A random forest classifier was used to distinguish morphological states, and ROC curves evaluated model performance.

Results: The classifier accurately predicted senescence in fibroblasts. Upon stimulation with cytokines, it also distinguished activated vs. resting synovial fibroblasts, with IL1 and PIC producing the strongest effects. Co-treatment with IL1 and paclitaxel improved classification of active vs. resting states, whereas CHX, MG132, and CPT reduced model accuracy, suggesting reliance on features related to RNA/protein homeostasis. However, the classifier could not distinguish between RA and OA fibroblasts at rest.

Conclusions: We established an HCI-based pipeline that sensitively detects activation-induced morphological changes in synovial fibroblasts. While not able to distinguish RA from OA fibroblasts in the resting state, this approach effectively captures functionally relevant morphological profiles and could support future high-throughput drug screening applications.

OP 3

Type I interferon signature negatively correlates with the expression of electron transport chain (ETC) components in mitochondria of peripheral blood B cells from patients with Sjögren's Disease

Kakale A[1], Malkewitz SV[1], Duphey SM[1], Müller-Durovic B[1]

[1]University Hospital of Zurich, University of Zurich, Center of Experimental Rheumatology, Department of Rheumatology, Zurich, Switzerland

Introduction: Sjögren's Disease (SjD) is a B cell-driven autoimmune disorder, with a major complication being the increased risk of B cell lymphoma. Cellular metabolism plays a key role in immune regulation. Metabolic remodeling critically regulates immune cell activation and has been implicated in overactivation and inflammation. Recent studies suggest that interferon (IFN) contributes to disease progression and B cell hyperactivity, but its relationship with B cell metabolism remains unclear.

Objective: To investigate the link between inflammation, specifically IFN signaling, and key metabolic pathways in peripheral blood B cells from SjD patients.

Methods: We analyzed single-cell RNA sequencing data from the GEO database GSE214974, containing over 230,000 CD19+ B cells from peripheral blood of SjD patients (n = 24; SSA−, SSA+, SSA/SSB+) and healthy controls (HC, n = 4). After quality control and normalization in Seurat, dimensionality reduction was performed using principal component analysis (PCA) on the top 4,000 most variable genes, followed by batch correction with Harmony. B cell subsets were annotated based on the literature. Differentially expressed genes (DEGs) were identified using FindMarkers with $|\log2FC| \geq 1$ and FDR ≤ 0.01. Pseudocounts were generated, the data re-normalized. An IFNα z-score was calculated for each sample and samples were grouped by hierarchical clustering. Associations between IFN score and mitochondrial gene expression were assessed with linear regression.

Results: We identified 202,583 high-quality B cells, annotated into naïve, transitional, memory (IgM, classical, double negative, stressed), and an IFN-responsive naïve cluster enriched in seropositive patients. IFNα/β pathway genes such as IFITM1,MX1, and IFI44L were significantly upregulated across all subsets. Mitochondrial genes involved in ETC (MT-ND2, MT-ND4, MT-CYB, MT-CO3) were consistently downregulated. Patients clustered into IFNα-positive and negative groups based on z-score, with seropositive patients showing stronger IFN responses. A significant negative correlation was found between IFNα scores and mitochondrial gene expression.

Conclusion: Our data reveal a distinct IFN type I signature in SjD B cells, especially in seropositive patients. Levels of IFNα-regualted genes showed a positive correlation with auto-antibody presence and a negative corelation with the gene expression of ETC subunits, suggesting a link between inflammation and altered B cell metabolism in SjD.

OP 4

Dysregulation of the Kynurenine Pathway in Rheumatoid Arthritis: Differential Expression in Circulating Monocytes, Joint Macrophages, and Serum

Malkewitz S[1], Duphey S[1], Makowiec C[2], Jäger J[2], Yang M[3], Khmelevskaia A[1], Lugar M[1], Frezza C[3], Kyburz D[4], Ospelt C[1], Distler O[1], Müller-Durovic B[1]

[1]Center of Experimental Rheumatology, Department of Rheumatology, University Hospital of Zurich, University of Zurich, Switzerland; [2]Immunobiology Laboratory, Department of Biomedicine, University of Basel and University Hospital of Basel, Switzerland; [3]CECAD Research Center, Faculty of Medicine, University Hospital Cologne, Germany; [4]Experimental Rheumatology, Department of Biomedicine, University of Basel and University Hospital of Basel, Switzerland

This study investigated the regulation of the kynurenine pathway in rheumatoid arthritis (RA) across three compartments: circulating monocytes, joint macrophages, and serum. The kynurenine pathway-the main catabolic branch of tryptophan metabolism-is induced during inflammation and has been previously shown to be altered in RA.

Monocytes were isolated from PBMCs of seropositive RA patients and matched healthy donors (HDs) (n = 6 each) using CD14 Microbeads. Metabolites were analyzed by LC-MS/MS. Gene expression was assessed via qPCR in RA (n = 6) vs HD (n = 4) monocytes and calculated as 2^ddCt. Single-cell RNA sequencing was performed using 10X Genomics and Illumina NovaSeq6000. Synovial macrophages from RA (n = 15), osteoarthritis (OA) (n = 5), and joint replacement (TRA) (n = 4) were analyzed. Marker-based clustering defined macrophage/monocyte subsets. Differential gene expression used MAST implementation in Seurat R. Serum samples from established RA (SCQM, n = 84) and early RA (SCREEN-RA, n = 288) were analyzed by FIA-MS.

Metabolomic analysis of circulating monocytes from RA patients revealed significant upregulation of the proximal kynurenine pathway, with increased levels of kynurenine and a two-fold elevation of 3-hydroxyanthranilate (3HAA). Conversely, downstream metabolites including quinolinic acid and NAD were decreased. qPCR analysis confirmed differential enzyme regulation: proximal enzymes Indoleamine 2,3-Dioxygenase 1 (IDO1) and Kynureninase (KYNU) were upregulated, while the downstream enzyme Quinolinate Phosphoribosyltransferase (QPRT) was downregulated.

Single cell RNA-sequencing from synovial biopsies showed KYNU expression in monocytes and macrophages. Specifically, joint infiltrating macrophages from RA patients showed increased KYNU expression compared to TRA and OA patients. Serum metabolomics of SCQM and SCREEN-RA samples showed elevated 3HAA serum levels in patients with established and active RA and not in pre-clinical or early RA.

Collectively, these findings reveal a consistent kynurenine pathway signature in RA characterized by predominant expression of proximal pathway components and downregulation of downstream metabolites involved in NAD de novo synthesis. This pattern is preserved in tissue-infiltrating macrophages, which maintain high KYNU expression for metabolizing kynurenine to 3HAA. The signature is also detectable in the serum of patients with established RA via significantly increased 3HAA levels compared to those with early disease.

OP 5

Transcriptomic and Metabolomic Profiling Reveals Upregulation of HIF1a–Linked OXPHOS Suppression, malic enzyme 3 (ME3) Upregulation, and Uric Acid Level changes in Rheumatoid Arthritis

Duphey S M[1], Malkewitz S[1], Kakale S[1], Hunter J[2], Makowiec C[2], Khmelevskaya A[1], Xenarios I[3], Lamachia C[4], Finckh A[4], Ospelt C[1], Müller-Durovic B[1]

[1]Center of Experimental Rheumatology (CER), University Hospital Zurich (USZ), University of Zurich (UZH), Switzerland; [2]Immunobiology Laboratory, Department of Biomedicine, University of Basel and University Hospital of Basel, Switzerland; [3]University of Lausanne and Centre Hospitalier Universitaire Vaudois (CHU), Switzerland; [4]Geneva University Hospitals (HUG), University of Geneva, Switzerland

Introduction: Rheumatoid arthritis (RA) is a chronic autoimmune disease marked by systemic inflammation and progressive joint destruction. RA pathogenesis is increasingly linked to metabolic changes in immune cells.

Aim: This study aimed to identify metabolic and transcriptomic signatures associated with RA development and disease activity using blood derived monocytes, single cell transcriptomics data from PBMCs, RNA from whole blood, plasma and serum

Method: Gene expression was assessed in CD14+ monocytes isolated from RA patients and matched healthy controls (HC, n = 4) using bulk RNA-sequencing. Additionally, single-cell RNA-sequencing was performed on RA peripheral blood mononuclear cells (PBMCs) (n = 5) and synovial macrophages(n = 13). We also analyzed matched transcriptomic and metabolomic data from whole blood and serum samples using bulk RNA-sequencing and (FIA–TOF) mass spectrometry, respectively, from the Screen-RA cohort (n = 288)—a longitudinal study of first-degree relatives of RA patients.Serum samples from RA patients with active disease (DAS-28-CRP >3.2), enrolled in the Swiss Clinical Quality Management in Rheumatic Diseases (SCQM) registry (n = 84), were used as a positive control group.

Results: RA monocytes showed an upregulation of HIF1a target genes based on transcriptional factor inference. Malic enzyme 3 (ME3), which converts malate to pyruvate, was upregulated in RA patients from the screen RA cohort, suggesting increased malate-pyruvate cycling and increased production of NADPH. We also observed a downregulation of mRNA levels of key subunits of the electron transport chain (ETC), specifically relating to complexes I, II, and IV(NDUFB1, NDUFB6, SDHB, COX7B, COX7A2), in the Screen-RA cohort consistent with downregulation of the Hallmark gene signature oxidative phosphorylation (OXPHOS) in monocytes from RA patients. Additionally, uric acid levels were altered in sera of RA patients, potentially reflecting increased purine metabolism and oxidative stress.

Conclusion: Our findings demonstrate that metabolic reprogramming is evident in monocytes and whole blood. Dysregulation of ME3 and ETC complex subunit mRNA levels points to TCA cycle remodelling and impaired OXPHOS. Altered uric acid levels in serum and upregulation of HIF1A activity in monocytes further support the role of metabolic stress in RA pathogenesis.

OP 6

IVD Degradation-Driven Accumulation of Cytotoxic Vδ1 T-cells in Modic Type 1 Changes

Devan Jan[1,4], Heggli Irina[2], Mengis Tamara[1,4], Sandalova Michaela[1,4], Burri Dominick[3], Herger Nick[1,4], Menghini Danilo[1,4], Hatt Phelipe[1,4], Farshad Mazda[4], Distler Oliver[1], Dudli Stefan[1,4]

[1]Center of Experimental Rheumatology, Department of Rheumatology, University Hospital Zurich, University of Zurich, CH; [2]Leni and Peter W. May Department of Orthopaedics Icahn School of Medicine at Mount Sinai New York New York USA; [3]Computational and Systems Biology, Biozentrum, University of Basel, Switzerland; [4]Department of Orthopedics, Balgrist University Hospital, University of Zurich, CH

Introduction: Modic type 1 changes (MC1) are painful vertebral bone marrow lesions adjacent to degenerated intervertebral discs. Bone marrow inflammation is a hallmark of MC1 lesions.

Objective: To investigate the immunological background of MC1.

Methods: Vertebral bone marrow aspirates were collected from MC1 patients (n = 22, MC1+intra-patient control = 8+8, control patients = 6) undergoing lumbar spinal fusion, mononuclear cells were isolated and investigated by massively parallel flow cytometry (FC) screening of 360 surface markers, followed by machine learning based prediction of their co-expression. T-cell functional properties were analysed with FC: 1.) ex vivo analysis of Granzyme B, 2.) cytokine release after in vitro stimulation with PMA/ionomycin, and 3.) proliferation in response to IL15. Single-cell RNA-sequencing (scRNA-seq) was performed on enzymatically digested MC1 and intra-patient control biopsies (n = 4+4). Extracellular matrix proteins of intervertebral discs (IVDs) were analysed by LC-MS/MS. Cartilage oligomeric matrix protein (COMP) was quantified in bone marrow plasma with ELISA. MC1-derived monocytes were treated with COMP, and surface IL15 levels were determined by FC.

Results: Immunophenotyping revealed accumulation of Vδ1 T-cells in MC1 compared to control patients (fold change 1.58, fdr<0.01) and intrapatient controls (fold change 1.55, p <0.5). Significant difference in the expression of 73 surface markers on Vδ1 T-cells in MC1 was detected. Most Vδ1 T-cells in MC1 expressed NKp80 (72%), and NKp80 was more expressed on Vδ1 T-cells than on other T-cells (72% vs 23%, p <0,01). NKp80+ Vδ1 cells expressed more Granzyme B (53% vs 16%) and produced more IFNγ (77% vs 25%) and TNF (84% vs 62%) upon stimulation than other T-cells (all p <0.01). Vδ1 T-cells expressed higher levels of IL15 receptors than other T-cells, and IL-15 selectively induced their proliferation in vitro (all p <0.01). Bone marrow plasma IL-15 levels correlated with Vδ1 frequency (R2 = 0.84, P <0.001). ScRNAseq revealed that IL-15 was predominantly expressed by CD16+ monocytes and that CD16+ monocytes accumulated in MC1 (fold change 1.3, fdr<0,5). IVD ECM component COMP was enriched in IVDs adjacent to MC1 (p <0.05) and in MC1 bone marrow (fold change 1.2, p <0.05) and COMP induced expression of IL15 by monocytes in vitro.

Conclusion: We discovered IVD degradation product-driven accumulation of cytotoxic and pro-inflammatory TCR Vδ1 T-cells driven in MC1 lesions.

POSTERS SGR-SSR

P 1

MRI has limited accuracy in diagnosing Complex Regional Pain Syndrome Type 1 - a systematic review of the literature

Henzi A[1,5], Schneider S[1], Sutter R[2], Wertli M M[3,4], Brunner F[1]

[1]1 Department of Physical Medicine and Rheumatology, Balgrist University Hospital, University of Zurich, Forchstrasse 340, CH-8008 Zurich, Switzerland; [2]2 Department of Radiology, Balgrist University Hospital, Forchstrasse 340, University of Zurich, CH-8008 Zurich, Switzerland; [3]3 Department of General Internal Medicine, cantonal Hospital Baden, Im Ergel 1, CH-5404 Baden, Switzerland; [4]4 Department of Internal Medicine, University Hospital Bern, Bern University, Freiburgstrasse 20, CH-3010 Bern, Switzerland; [5]5 Present address: Department of Rheumatology, University Hospital of Zurich, Rämistrasse 100, CH-8091 Zurich, Switzerland

Objectives: To review the current body of research on the diagnostic accuracy of magnetic resonance imaging (MRI) in Complex Regional Pain Syndrome (CRPS) Type 1 in the existing literature.

Material and methods: A systematic search was conducted across MEDLINE, Embase, Cochrane, Scopus, and Web of Science from their inception to September 2023, following PRISMA guidelines. Risk of bias assessment was performed for all identified articles, and predictive performance values, including sensitivity and specificity, were extracted for quantitative analysis.

Results: Fifteen studies published between 1991 and 2022, encompassing 562 patients (353 with CRPS Type 1 and 209 controls), were included in the analysis. The sensitivity of MRI in diagnosing CRPS Type 1 ranged from 6% to 91%, while specificity ranged from 50% to 100%, with substantial heterogeneity across studies. Bone marrow edema was the most frequently evaluated MRI feature, predominantly observed in the early stages of the disease. Risk of bias was noted in most studies due to inconsistent diagnostic criteria, non-standardized imaging protocols, and incomplete reporting of clinical and demographic data. Comparative studies showed inconsistent performance metrics, while non-comparative studies highlighted variability in MRI findings across different CRPS Type 1 presentations.

Conclusion: MRI is not accurate in diagnosing CRPS Type 1, with a lack of consistent findings across studies. While it may assist in differential diagnosis, its utility as a standalone diagnostic tool is very limited.

Clinical relevance statement: MRI can be used as an adjunct to clinical assessment for CRPS Type 1 to exclude alternative diagnoses and guide management but lacks the diagnostic accuracy to diagnose CRPS Type 1.

P 2

Ultrasound assessment of the myotendinous junction of the long head of the biceps tendon for evaluating tendon integrity

Etter M[1], Schätz J[2,3], de Jong M[4], Scheibel M[5], Freislederer F[5], Diermayr S[1]

[1]Departement of Rheumatology Schulthess Clinic, Zurich, Switzerland; [2]Group upper Extremities, Department Teaching of Research and Development, Schulthess Clinic, Zurich, Switzerland; [3]Institute for Therapies and Rehabilitation, Cantonal Hospital Winterthur, Switzerland; [4]AO Spine, Davos, Switzerland; [5]Departement of shoulder and elbow surgery Schulthess Clinic, Switzerland

Purpose: Standard ultrasound examination of the long head of the biceps brachii tendon (LHBT) is focused on the tendon structure itself, what especially after LHBT surgery, may lead to inaccurate diagnosis. Furthermore, it provides no information about tendon elongation or distalisation. Therefore, we propose a different approach focusing on the myotendinous junction (MTJ).

Materials and Methods: We performed a single-center observational study involving two comparable groups, wherein sonographic evaluations were consistently conducted by the same sonographers for both groups. For each group the starting point of the MTJ of the LHBT was measured in relation to the Pectoralis major tendon (PMT).

Results: In healthy subjects, the between-side difference of the LHBT MTJ position was found to be less than 1.0 cm, with an average between-side difference of 0.28 cm [95% CI: 0.22 – 0.34]. Compared to the between-side difference in the group with subpectoral tenodesis of the LHBT on one side, which was 2.99 cm [95% CI: 2.44 - 3.54], the between-side difference in healthy subjects was significantly smaller. The maximum absolute inter-rater difference in the between-side comparison was 0.8 cm, which fell within our predefined equivalence margin of 1 cm, resulting in an excellent Cohen's Kappa of 1.0.

Conclusion: Our results suggest that Ultrasound evaluation of the starting point of the LHBT MTJ in relation to the PMT is possibly a quick, reliable, and effective method for assessing the integrity of the LHBT after subpectoral tenodesis. Similar outcomes may be observed in other forms of LHBT pathologies, such as tenotomy or rupture. Further research with larger sample sizes is essential to more comprehensively investigate this hypothesis.

P 3

Ultrasound insights into enthesitis: discriminative value of inflammatory and structural lesions across the entheseal sites, comparing spondylarthritis patients to healthy individuals

Elsehrawy GG[1], Courvoisier DS[1], Deman E[2], Dan D[3], Micheroli R[4], Ziswiler H[5], Zufferey P[6], Brülhart-Bletsas L[7], Nissen MJ[1]

[1]Department of rheumatology, Geneva University Hospital , Switzerland; [2]Department of Rheumatology, University hospital of Basel, Basel, Switzerland; [3]Department of Rheumatology, University Hospital of Lausanne, Lausanne, Switzerland; [4]Department of Rheumatology, University Hospital of Zurich, Zurich, Switzerland; [5]OsteoRheuma, Bern, Switzerland; [6]Department of Rheumatology, Fribourg Hospital, Fribourg, Switzerland; [7]Department of Rheumatology, Neuchatelois Hospital, La Chaux-de-Fonds, Switzerland

Objective: To determine which ultrasonographic lesions of enthesitis and which anatomical entheseal sites are best able to discriminate between spondylarthritis (SpA) patients and healthy controls (HC).

Methods: We included patients with psoriatic arthritis (PsA) and axial spondylarthritis (axSpA), followed within the Swiss Clinical Quality Management (SCQM) database from 6 Swiss hospital outpatient clinics, as well as HC. Participants underwent a standardized musculoskeletal (MS) ultrasound (US) examination including 9 entheseal sites bilaterally (supraspinatus (SS), lateral epicondyle (LE), medial epicondyle (ME), greater trochanter (GT), quadriceps tendon (QT), proximal patellar (PP) and distal patellar (DP) ligaments, Achilles tendon (AT), and plantar fascia (PF)) by 6 rheumatologists experienced in MSUS. All entheses were scored according to OMERACT criteria, with an additional evaluation of bursitis and power Doppler (PD) in the 2-5mm insertion zone (according to GRAPPA). Active enthesitis was defined according to OMERACT criteria. All multivariable analyses were adjusted for age and body mass index.

Results: Overall, 121 participants were included: 41 with PsA (mean age±SD, % male: 54.5±11.0, 63.4%), 39 with axSpA (45.1±10.0, 51.3%), and 41 HC (43.9±10.9, 56.1%), with a total of 2178 entheses evaluated. The PsA and axSpA groups showed no significant differences regarding inflammatory markers or disease activity scores. There was no significant difference between all 3 groups in terms of physical activity (GPAQ score). While erosions were significantly more common in axSpA compared to PsA and HC at the SS, GT, DP, and AT insertions (p <0.001), bursitis was more prevalent in PsA, notably at the SS (p = 0.001). In the univariable analysis, all US lesions at the enthesis showed a significant association with SpA versus HC. However, only B-mode inflammatory lesion (p = 0.034) and active enthesitis (p = 0.003) retained this association in multivariable regression analyses. Among all 9 entheses, 4 entheses (LE, DP, AT, and PF) were associated with SpA in univariable analyses. In multivariable analyses, only the DP ligament insertion was significantly associated with SpA (p = 0.039).

Conclusion: To distinguish SpA patients from HC, any sonographic scoring system should account not only for the presence of particular lesions (structural and inflammatory) but also for the specific entheseal site affected. These findings may assist with the development of a new US score.

P 4

First profiling of the swiss national SCQM Giant Cell Arteritis and Polymyalgia rheumatica registry

Stegert M[1], Brändli J[2], Blapp C[2], Mahr A[3], Iudici M[4], Tamborrini G[6], Christ L[5], Neumann T[9], Becker M[10], Berger C[1], Iking-Konert C[7], Scherer A[2], Villiger P[8], Daikeler T[1]

[1]Department of Rheumatology, University Hospital Basel, Switzerland; [2]SCQM Foundation, Swiss Clinical Quality Management in Rheumatic Diseases, Switzerland; [3]Kusnacht Practice, Zürich-Zollikon, Zürich, Switzerland; [4]Geneva University Hospitals and University of Geneva, Rheumatology, Geneva, Switzerland; [5]Bern University Hospital, Rheumatology and Immunology, Bern, Switzerland; [6]UZR.swiss, Rheumatology, Basel, Switzerland; [7]Stadtspital Zürich, Rheumatology, Zürich, Switzerland; [8]Villiger Rheuma, Medizinisches Zentrum Monbijou, Bern, Switzerland; [9]Cantonal Hospital St. Gallen, Rheumatology, Saint Gallen, Switzerland; [10]Universitiy Hospital Zürich, Rheumatology, Zürich, Switzerland

Background: Giant cell arteritis (GCA) and polymyalgia rheumatica (PMR) constitute the giant cell arteritis spectrum disease (GPSD). Disease stratification and risk assessment within this spectrum remains an unmet need.

Methods/Objectives: We established 2020 a Swiss cohort for PMR and GCA patients within the Swiss Clinical Quality Management in Rheumatic Diseases (SCQM) foundation. This first cohort profile outlines patient characteristics, diagnostic findings, and treatment approaches.

Results: Between August 2020 and June 2024, 436 patients (337 GCA, 99 PMR) were included, median age was 72 years (IQR: 65-77) for GCA and 71 years (IQR: 63-77) for PMR, with 64% and 56% female patients, respectively. Of the GCA patients 51%, and of the PMR patients 30% were newly diagnosed (within 14 days), while the rest of the patients had an established disease. Patients were enrolled across Switzerland, from tertiary hospitals (74%), regional hospitals (12%) and rheumatologists in private practice (14%). At diagnosis, 81% of GCA patients reported cranial symptoms, 31% visual symptoms, and 43% polymyalgic symptoms. In PMR, 95% reported shoulder girdle pain, 85% pelvic girdle pain, and 44% neck pain. Among the 171 new diagnosed GCA patients, 26 (15%) had a previous diagnosis of PMR, which was revised to GCA after a median of 124 days [IQR 6, 765]. Ultrasound was the most used diagnostic imaging modality in GCA (76%), followed by PET-CT (59%) and MRI (40%). Temporal artery biopsy was performed in 29% of GCA patients, with a positive diagnostic yield of 66%. At 6, 12, and 24 months after diagnosis 79%, 50%, and 37% of GCA patients, respectively still took steroids. Steroid-sparing treatment was used in 77% of GCA patients, tocilizumab (73%) being the most common and was taken for a median time of 19 months. The median time from the GCA diagnosis to initiation of Tocilizumab was 87 days, IQR [31, 247]. Hypertension (51% GCA, 44% PMR), diabetes (15% GCA, 12% PMR), and osteoporosis (26% GCA, 15% PMR) were common comorbidities. GCA patients had a higher incidence of ischemic stroke, 7.1% (21/295) vs. 1.1% (1/91) in PMR (p = 0.035).

Conclusions: Patients included in the SCQM GCA-PMR registry highlight the challenges of managing individuals with significant comorbidities. Although steroid sparing treatments are available, many patients still require prolonged therapy. Widely used throughout Switzerland, the SCQM registry supports future research in GPSD.

P 5

The Swiss Sjögren Cohort, a national collaborative project

Dumusc A[1], Sprecher M[2], Bannert B[3], Grosjean A[4], Kocher A[5], Lauper K[6], Klein K[7], Gadola S[8], Adler S[9], Ribi C[10], Kollert F[3], Christ L[7]

[1]Rheumatology Department, University Hospital Lausanne, Lausanne, Switzerland; [2]Rheumatology Department, University Hospital Zürich, Zürich, Switzerland; [3]Rheumatology Department, University Hospital Basel, Basel, Switzerland; [4]Association Romande du Syndrome de Sjögren, Vevey, Switzerland; [5]Nursing science, University of Basel, Basel, Switzerland; [6]Division of Rheumatology, Geneva University Hospitals, Geneva, Switzerland; [7]Department of Rheumatology and Immunology, Bern University Hospital, University of Bern, Bern, Switzerland; [8]Clinic of Rheumatology and Pain Medicine, Bethesda Hospital, Basel, Switzerland; [9]Rheumatology and Immunology Department, Aarau Cantonal Hospital, Aarau, Switzerland; [10]Immunology and Allergy Department, University Hospital Lausanne, Lausanne, Switzerland

Introduction: Sjögren's disease (SjD) is a chronic autoimmune disorder characterized by inflammation of the exocrine glands leading to sicca symptoms, systemic manifestations, and increased lymphoma risk. This condition remains underdiagnosed and underresearched, with limited therapeutic options and a lack of reliable prognostic markers. The heterogeneity of clinical presentation and disease course leads to major challenges in diagnosis, management, and research. To enable research to address these gaps, the Swiss Sjögren Cohort (SSC) was established as a nationwide, multicenter, prospective cohort study.

Methods: The SSC includes adult patients with sicca symptoms, suspected or confirmed SjD, whether or not associated with another autoimmune disease, recruited at centers of rheumatology/immunology across Switzerland. The study collects longitudinal data on demographics, clinical status, comorbidities, and therapies. Patient-reported outcomes on disease-related symptoms, quality of life, healthcare utilization and physical activity are recorded (e.g., ESSPRI, EQ-5D, HADS, FSS). Biological samples—blood, saliva, tear fluid, and tissue—are collected and stored locally under harmonized protocols across participating centers. All data are managed in a centralized, coded REDCap database.

Results: After focusing on setting up the legal framework, gaining ethics approval, and creating the project's research database, the first patient was included in the cohort in October 2024, and the number of inclusions is steadily increasing. This project is an example of an investigator-initiated national collaborative project involving patient representatives and clinicians, healthcare representatives, basic and clinical scientists with a special interest in SjD.

The cohort structure supports observational analyses and mechanistic investigations, facilitating cross-center collaboration. The infrastructure supports nested projects with separate ethical approval, allowing targeted research into pathophysiology, biomarkers, and outcomes.

Conclusion: The SSC is a sustainable, prospective patient-centred research platform designed to enhance the understanding of SjD in Switzerland. It enables integrated clinical, biological, and psychosocial data collection and offers opportunities for translational and clinical research on local, national, and international levels.

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P 6

Osteoporosis Treatment Rates Following Hip, Spine, and Other Fractures in Older Adults in Switzerland: Insights from National Health Claims Data (2021–2023)

Everts-Graber J[1,2,3], Schmid G[4], Häuselmann HJ[5], Huber C[9], Streit S[6], Ravensburger W[6], Reichenbach S[1,7], Pinedo-Villanueva R[8], Graber S[9]

[1]Department of Rheumatology and Immunology, Inselspital, Bern University Hospital, University of Bern, Switzerland; [2]OsteoRheuma Bern, Bahnhofplatz 1, Bern, Switzerland; [3]Department of Diabetes, Endocrinology, Nutritional Medicine and Metabolism, Inselspital, Bern University Hospital, University of Bern, Bern, Switzerland; [4]Department of Rheumatology, Lucerne Regional Hospital, Lucerne, Switzerland; [5]Zentrum für Rheuma- und Knochenerkrankungen, Klinik Im Park, Hirslanden Zürich, Switzerland; [6]Institute of Primary Health Care (BIHAM), University of Bern, Bern, Switzerland; [7]National Institute for Health and Care Research Oxford Biomedical Research Center, Oxford, UK; [8]Institute for Social and Preventive Medicine, University of Bern, Bern, Switzerland; [9]Department of Health Sciences, Helsana Group, Zurich, Switzerland

Background: The treatment gap in osteoporosis in Switzerland has previously been estimated at 83%, based on T-scores and/or FRAX thresholds. However, real-world data on treatment rates following major osteoporotic fractures remain limited. This study aimed to analyse treatment rates in patients aged ≥50 years with recent vertebral, hip, or other fractures, and the associated economic burden.

Methods: This retrospective observational study utilised claims data from a large Swiss health insurance provider. The incidence of vertebral, hip, and other fractures was assessed by age and gender, and treatment rates with bone-specific drugs within 6 and 12 months post-fracture were analysed. Additionally, hospital length of stay, associated costs, and care trajectories (nursing home placement, rehabilitation, home care services) were described for each fracture type, as well as mortality within 12 and 24 months post-fracture.

Results: From 2021 to 2023, a total of 2,458 vertebral fractures (59% in women), 6,229 hip fractures (70% in women), and 11,314 non-hip, non-spine fractures (74% in women) were recorded. Rehabilitation stays were required in 7–12% of cases, and 18–21% of patients transitioned to new nursing home placements within three months post-fracture. DXA scans were performed within six months in 7% of hip fracture patients and 17% with clinical vertebral fractures. Treatment initiation within six months post-fracture was 12.2% in hip fracture patients (including 5.0% denosumab, 2.6% zoledronate, 2.1% alendronate), 24% in vertebral fracture patients (including 9.4% denosumab, 4.7% zoledronate, 3.6% ibandronate, 2.7% anabolic agents), and 12.8% following other fracture types

Conclusion: Osteoporosis treatment rates after hip and vertebral fractures are low, with 88 % and 76% of patients, respectively, not receiving treatment within six months. Understanding the drivers of this gap are key to improving post-fracture care.

P 7

Long-Term Impact of Teriparatide on Bone Mineral Density, Trabecular Bone Score, and Fracture Risk Relative to Total Hip T-score: A Two-Decade, Registry-Based Cohort Stud

Guyer L[1], Lehmann O[2], Wenger M[3], Oser S[3], Studer U[4], Steiner C[4], Ziswiler R[4], Schmid G[5], Häuselmann HJ[3], Reichenbach S[6,7], Lehmann T[4], Everts-Graber J[4,6,8]

[1]Faculty of Medicine, University of Bern, Bern, Switzerland; [2]ETH Zürich, Department of Information Technology and Electrical Engineering, Zürich, Switzerland; [3]Zentrum für Rheuma- und Knochenerkrankungen, Klinik Im Park, Hirslanden Zürich, Switzerland; [4]OsteoRheuma Bern, Bahnhofplatz 1, Bern, Switzerland; [5]Department of Rheumatology, Lucerne Regional Hospital, Lucerne, Switzerland; [6]Department of Rheumatology and Immunology, Inselspital, Bern University Hospital, University of Bern, Switzerland; [7]Institute for Social and Preventive Medicine, University of Bern, Bern, Switzerland; [8]Department of Diabetes, Endocrinology, Nutritional Medicine and Metabolism, Inselspital, Bern University Hospital, University of Bern, Switzerland

Background: Teriparatide followed by antiresorptive therapy exhibits fracture reduction efficacy for up to 2 years, but it remains unclear if this leads to sustained increases in bone mineral density (BMD) and trabecular bone score (TBS), and if BMD correlates with fracture risk reduction.

Methods: In this multicenter cohort study, the effect of teriparatide administration for 18-24 months, followed by antiresorptive therapy, was assessed in patients partipicipating in a nationwide Swiss osteoporosis registry. BMD and TBS were measured up to 10 years before and after teriparatide initiation.

Results: A total of 624 patients (87% female, age 67±13 years) were enrolled from May 2004 to December 2023. Among them, 198 (32%) received no treatment prior to teriparatide, while 426 had received previous antiresorptive therapies (median duration 5.9 years [2.2, 8.0]). All patients underwent subsequent antiresorptive therapy, mainly with bisphosphonates and denosumab. The incidences of vertebral, hip, and any fractures were 0.96, 0.11, and 1.37, respectively, within 2 years prior to teriparatide initiation. The total hip T-score did not correlate with fracture reduction under teriparatide. After transitioning from teriparatide to an antiresorptive regimen, fracture incidence remained low and BMD was significantly higher for up to 5 years after teriparatide compared to the pre-treatment period (T-score +0.876 for lumbar spine, $p < 0.001$; and +0.112 for total hip, $p < 0.005$), while TBS increased by 0.047 ($p < 0.001$). Overall, significant improvement was observed in pretreated and treatment-naïve patients undergoing teriparatide treatment.

Conclusion: Teriparatide led to sustained lower incidences of vertebral, hip, and other fractures for up to 8 years after switching to antiresorptive agents in both pretreated and treatment-naïve patients. Additionally, BMD and TBS levels were significantly higher than those before teriparatide treatment. During teriparatide treatment, the total hip T-score did not correlate with fracture risk.

P 8

Giant cell myocarditis and giant cell myositis with thymoma

Seitz P[1], Boscolo Berto M[2], Gasser M[1], Maurer B[1], Seitz L[1]

[1]Department of Rheumatology and Immunology, Inselspital, Bern University Hospital, University of Bern, Switzerland; [2]; [3]Department of Cardiology, Inselspital, Bern University Hospital, University of Bern, Switzerland

A 52-year-old female patient presented with a dry cough and myalgia followed by rapidly progressive shortness of breath two weeks later. Physical exam was remarkable for multifocal indurated and painful muscles and distal leg edema. CRP was 4mg/l, CK 814 U/l, Troponin T 239 ng/l and Nt-proBNP 6670

pg/ml. She had bilateral pleural effusions and a severely reduced LVEF of 20%. Further testing showed normal antinuclear antibodies and myositis-panel, normal calcium but elevated 1,25-OH-Vitamin-D and a slightly elevated sIL2-Receptor. Cardiac MRI showed diffuse severe myocardial edema of both ventricles and signs of pericarditis. Whole-body MRI showed multifocal patchy edema of proximal and distal muscles. The right gastrocnemius muscle was biopsied. On histology there were chronic inflammatory infiltrates with predominance of CD8+ T-cells, focal epitheloid cells and giant cells without granuloma formation as well as eosinophilic granulocytes and muscle fibre necrosis. A FDG-PET-CT showed a cystic lesion of 4 cm diameter in the anterior mediastinum. Only fluid could be aspirated on attempted biopsy. Because of suspected thymoma immune serology for myasthenia gravis was added and showed high titres for anti-Acetylcholine-Receptor and anti-Titin antibodies. The diagnosis of giant cell myocarditis and giant cell myositis in the setting of a thymoma without clinical signs of myasthenia gravis was made. High dose glucocorticoids, tacrolimus (trough-level 10-15 ng/ml), and mycophenolate mofetil were administered according to available evidence. An ICD was implanted as primary prophylaxis for malignant arrhythmias. The mediastinal mass was removed and confirmed to be a thymoma. After 1 year mycophenolate mofetil was tapered and the patient remains on medium dose tracrolimus and 5mg of prednisolone. The patient regained a good quality of life and LVEF recovered to 45-50%.

Conclusion: Giant cell myocarditis can present as a systemic autoimmune disease together with giant cell myositis and possibly myasthenia gravis in the setting of a thymoma. There is a characteristic histological pattern that must be differentiated mainly from sarcoidosis. Due to a high mortality and high rate of cardiac transplantation an aggressive combined immunomodulatory, T-cell oriented therapy is indicated, part of which is usually continued for several years or indefinitely. A thymoma is usually surgically removed; if there is a therapeutic advantage for this immune disease remains unclear.

P 9

Arthrite et Tuberculose: il fallait y Poncet.

Colombo CE[1], Alromaih FJ[1], Alexe R[1], Argyriou P[2], Bisig B[2], Dumusc A[1], Dan D[1], Hügle T[1]

[1]Rheumatology Department, Lausanne University Hospital, Lausanne, Switzerland; [2]Molecular Pathology Department, Lausanne University Hospital, Lausanne, Switzerland

Introduction: Tuberculosis (TB) is a major public health challenge, remaining the leading cause of mortality with infectious diseases. Extrapulmonary TB (EPTB) occurs when M.Tuberculosis infects organs other than the lungs (PTB), presenting in many forms. Poncet's disease (PD) is a form of reactive arthritis presenting as non-erosive oligo-polyarthritis in the setting of EPTB.

The case: In early summer 2024, a 61-year-old man who had liver cirrhosis was hospitalised in the internal medicine department for symptomatic PTH-independent hypercalcaemia (3.15 mmol/l). Hydration, Zoledronate, calcitonin and prednisone were ineffective in resolving the hypercalcaemia. Clinical suspicion of a tuberculous granulomatous disease was made in the presence of a positive M. Tuberculosis QuantiFERON test, elevated ACE 159.5 U/L and sCD25: 6483pg/ml. CT scan of thorax and abdomen showed diffuse nodules (lungs, omentum, peritoneum, and thoracic and abdominal lymph nodes). Biopsy of a retroperitoneal lymph node confirmed the presence of necrotizing granuloma with a positive PCR for M.Tuberculosis, as well as a positive GeneXpert analysis on the BAL samples. The diagnosis of PTB and EPTB was established, and standard 4-drug FDC for 2 months followed by 2-drug FDC for 4 months was initiated. Clinical improvement followed with normalisation of calcaemia and resolution of lymphadenopathy. In late December 2024, the patient was referred to Rheumatology for inflammatory arthritis of the knees, hands and feet associated with lower back pain. Paracetamol and on demand Morphine was started by the PCP, with no improvement. After ruling out infectious causes, oral Prednisone was initiated, preferred over NSAIDs due to cirrhosis. Rheumatoid factor, anti-CCP were negative, with aspecific ANA. Lumbar MRI ruled out Pott's disease and skeletal scintigraphy (performed 5 days after steroid washout) didn't show skeletal TB. The diagnosis of a PD was made. Classically, PD was reported as arthritis developing in the acute onset of TB, however subsequent reports show that Poncet's disease can develop after commencement or even after completion of anti-tuberculosis therapy. The patient showed rapid clinical improvement, and did not present any arthritis relapse during follow up.

Conclusion: This case highlights a challenging diagnosis. TB is still a prevalent infectious disease, and Poncet's is an important musculoskeletal manifestation to be considered in associated arthritis.

P 10

A Silent Clue in the Tendons: When Tenosynovitis Was Just the Beginning

Fedeli M[1], Garzoni C[2]

[1]Rheumatology Department, Clinica Luganese Moncucco, Lugano, Switzerland; [2]Internal Medecine Department, Clinica Luganese Moncucco, Lugano, Switzerland

We report the case of a 48-year-old woman with a long-standing history of treatment-resistant oligoarthritis. Her symptoms began in 2011 with recurrent swelling of the left wrist. A hand surgeon diagnosed tenosynovitis of the fourth dorsal extensor compartment. Due to persistent inflammation, a rheumatologic assessment revealed tenosynovitis of the left hand, synovitis of proximal and distal interphalangeal joints, dactylitis of hands and feet, arthralgia in elbows and ankles, and chronic low back pain.

Rheumatologic workup (RF, ANA, ACPA, ENA, complement, anti-dsDNA, ACE) showed only low-titer ANA positivity. Radiographs were normal; lumbar/sacral MRI excluded axial spondyloarthritis. Hand MRI revealed synovial thickening without erosions. A diagnosis of undifferentiated autoimmune oligoarthritis was made.

Initial therapy with corticosteroids and hydroxychloroquine failed; methotrexate provided only transient benefit. Biologic agents (etanercept, golimumab, abatacept, secukinumab, tofacitinib) yielded partial, short-lived responses. Synovial biopsy (2017) showed intense inflammation without crystals; cultures were negative.

In 2022, adalimumab plus leflunomide induced a good response for one year. From summer 2024, the patient developed frequent flares, left hand swelling, fatigue, low-grade fever, and elevated inflammatory markers. In January 2025, ultrasound confirmed recurrent tenosynovitis of the fourth extensor tendon. Joint aspiration revealed inflammatory synovial fluid without crystals; PCR was positive for Tropheryma whipplei, also detected in stool and duodenal biopsy.

Immunosuppressive therapy was discontinued, and antibiotic treatment was started: ceftriaxone 2?g i.v. daily for two weeks, followed by oral trimethoprim-sulfamethoxazole. The patient achieved rapid clinical remission, with full resolution of arthritis, tenosynovitis, and dactylitis.

Eight hours after the first ceftriaxone dose, she developed a transient febrile episode (39.4?°C) with chills. Extensive evaluation ruled out other infections, and the patient recovered within a few hours. We interpreted this reaction as a Herxheimer reaction (Jarisch-Herxheimer reaction), a transient inflammatory response classically seen after initiating treatment for certain infections, particularly bacterial infections such as syphilis or Lyme disease.

P 11

M. tuberculosis, der grosse Mimiker: eine mögliche Ursache von chronischer Monoarthritis und Daktylitis

Louppides S[1], Möller B[1], Manigold T[1]

[1]Department of Rheumatology and Immunology, Inselspital, Bern University Hospital, University of Bern, 3008 Bern, Switzerland.

Wir berichten über einen 42-jährigen Mann türkischer Herkunft mit chronischer Monoarthritis im rechten Knie und anschliessender Daktylitis des rechten Zeigefingers, die zunächst als periphere Spondyloarthritis behandelt wurde. Aktenanamnestisch wurde eine latente Tuberkulose über 4 Monate mit Rifampicin behandelt. Anamnestisch ergaben sich hinsichtlich der Therapieadhärenz jedoch gewisse Zweifel.

Die monarthritischen Symptome persistierten trotz der Behandlung mit mehreren konventionellen, biologischen und zielgerichteten synthetischen DMARDs. Der Patient sprach auch auf mehrfache intraartikuläre Steroidinfiltrationen immer nur kurz an. Bei persistierenden Beschwerden stark erhöhtem CRP und subfebrilen Temperaturen wurde uns der Patient zur genaueren Abklärung und zur Synovialbiopsie des rechten Kniegelenks zugewiesen. Es zeigte sich ein hoch-entzündliches Synoviapunktat, die Kristallanalyse und reguläre Bakteriologie verliefen negativ. In der erweiterten Diagnostik zeigten sich keine Hinweise auf eine pulmonale oder anderweitige Manifestation der Tuberkulose. Bereits kurz nach der Biopsie wurde aufgrund des hohen Verdachts eine Vierfachtherapie auf M. tuberculosis eingeleitet.

Im Punktat und den Biopsien verliefen der mikroskopische Nachweis sowie die PCR auf M. tuberculosis negativ, Kulturen aus beiden Kompartimenten wurden angelegt. Eine Steroidinfiltration erbrachte nur eine kurze klinische und laborchemische Besserung. Erneute Gelenkpunktionen 3 Tage und 4 Wochen nach der Biopsie zeigten dann ein immediaten positiven Befund in der PCR auf. M. tuberculosis, wohingegen der Direktnachweis und die angelegten Kulturen bis dato negativ blieben. Vier Wochen nach der Biopsie zeigte sich die Kultur auf M. tuberculosis aus dem Punktat im Rahmen der Biopsie positiv, wohingegen Kulturen aus den Biopsien bis dato negativ blieben.

Schlussfolgerung: Bei Patienten mit chronischer Monoarthritis und fehlendem Ansprechen bzw. Verschlechterung auf eine immunsuppressive Therapie sollte die Tuberkulose differentialdiagnostisch in Betracht gezogen werden, insbesondere bei Patienten mit epidemiologischen Risikofaktoren. Eine frühzeitige Biopsie und wiederholte mikrobiologische Analysen sind der Schlüssel zur Diagnose. Die Erkennung und rechtzeitige Behandlung der Tuberkulosearthritis ist entscheidend, um irreversible Gelenkschäden zu verhindern

P 12

DRESSed like Still's disease: A case report of a pregnant patient with AOSD

Akyol O[1], Jörg L[2], Mosimann B[3], Bernsmeier C[4], Berger C [5], Daikeler T[1], Kyburz D[1], Kollert F[1]

[1]Department of Rheumatology, University Hospital Basel, Switzerland; [2]Department of Allergology, Inselspital, Bern University Hospital, Bern, Switzerland; [3]Department of Obstetrics, University Hospital of Basel, University Hospital Basel, Basel, Switzerland; [4]University Centre for Gastrointestinal and Liver Diseases, Basel, Switzerland; [5]University Center of Immunology, University Hospital Basel, Basel, Switzerland

Adult-onset Still's disease (AOSD) is a rare systemic autoinflammatory disease. This case illustrates the complexity of managing AOSD in pregnancy, complicated by Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS) under cytokine-inhibiting therapy.

A 36-year-old pregnant woman presented in early second trimester with fever, arthritis, salmon-colored rash, lymphadenopathy, anemia, and elevated transaminases. AOSD was diagnosed and treated with prednisone and anakinra, with initial improvement. In the third trimester, liver enzymes increased. Differential diagnoses included AOSD activity, drug-induced liver injury, and intrahepatic cholestasis of pregnancy. Methylprednisolone pulse therapy was initiated, and anakinra was replaced by tocilizumab (TCZ). Ursodeoxycholic acid was added. This led to full clinical remission. A healthy infant was delivered at 37 weeks.

Postpartum, a flare occurred under TCZ and prednisone, with fever, rash, pharyngitis, arthralgia, facial edema, and mild eosinophilia. TCZ was switched to canakinumab (CNK), which triggered emesis, pruritus, and fingertip exfoliation. Ten days later, worsening symptoms and marked eosinophilia raised suspicion of DRESS. Skin biopsy confirmed eosinophilic dermatitis. CT showed diffuse lung disease with septal thickening, compatible with diffuse lung disease, and bilateral pleural and pericardial effusion.

In accordance with increasing evidence, anti-IL1 and anti-IL-6R treatment (including TCZ, Anakinra, CNK) were considered potential triggers for DRESS. JAK inhibition was not tolerated. Cyclosporin and benralizumab (anti-IL-5R treatment) led to pulmonary improvement including normalization of CT scan, and resolution of peripheral eosinophilia. However, systemic symptoms recurred with predominant arthritis and steroid tapering failed. Methotrexate was added and cyclosporin dose increased.

This case highlights not only the complexity of AOSD in pregnancy but also the difficulty of identifying DRESS when clinical features overlap with AOSD. Clinicians should be vigilant for DRESS in AOSD patients on IL-1 or IL-6R inhibitors. Identifying the culprit agent under immunosuppression is difficult and the disease course of DRESS can be prolonged and include complications such as diffuse lung disease, which carries a high mortality risk.

P 13

A case of tracheobronchopathia osteochondroplastica as a rare pulmonary manifestation of rheumatoid arthritis

Joos L[1], Rassouli F[2], Kellner J[3], Förger F[1], Rubbert-Roth A[1]

[1]Division of Rheumatology and Immunology, HOCH Health Ostschweiz, Kantonsspital St.Gallen; [2]Lung Center HOCH Health Ostschweiz, Kantonsspital St.Gallen; [3]Division of Radiology and Nuclear Medicine, HOCH Health Ostschweiz, Kantonsspital St. Gallen

We hereby present the case of a 53-year old female patient who was referred to our rheumatology clinic with suspected rheumatoid arthritis due to pain of the fingers, elbows, and shoulders for more than 6 months. The referring internal medicine specialist had noted arthritis of the MCP joints and tenosynovitis of the flexor tendons, that was not confirmed when the patient was seen in our clinic. Low positive rheumatoid factor (9.8 IU/ml, normal <3.5 IU/ml) and CCP-antibodies (21 U/ml, normal <7 U/ml) were detected. ESR was slightly elevated (39 mm/h, normal <30 mm/h) and CRP was within the normal range.

Treatment with methotrexate and glucocorticoids was started, which improved the clinical symptoms rapidly, but did not lead to complete remission. Therefore therapy escalation with infliximab was discussed.

Because of a refractory cough and dyspnea on exertion, the patient was referred to the pulmonology clinic. Pulmonary function tests showed a severe mixed obstructive and restrictive disorder. CT imaging showed hyperdense thickening of the tracheal wall and normal parenchymal lung tissue. During bronchoscopy, mucosal thickening at multiple sites of the tracheal wall was noted. The initial biopsy showed non-specific inflammation and fibrosis. Histology of a subsequent cryobiopsy showed focal metaplastic ossifications suggestive of tracheobronchopathia osteochondroplastica (TO). Together CT-imaging and bronchoscopy findings as well as histology were consistent with TO.

Few case reports on this rare pulmonary manifestation of rheumatoid arthritis have been published. Good response to inhaled corticosteroids and bronchodilators has been reported. There are also reports of local therapy including airway stenting in difficult to treat cases. It remains unclear if cDMARD or bDMARD therapy can improve the course of TO. In our case, therapy with infliximab is planned.

P 14

Features of IgG4-related disease in a patient with granulomatosis with polyangiitis

Kollert F[1], Bisharat DR[1], Hausenberger B[2], Negoias S[2], Heijnen I[3], Tzankov A[4], Kyburz D[1], Daikeler T[1]

[1]Department of Rheumatology, University Hospital Basel, Basel, Switzerland; [2]Department of Othorhinolaryngology, Head and Neck Surgery, University Hospital Basel, Basel, Switzerland; [3]Immunology, Laboratory Medicine, University Hospital Basel, Basel, Switzerland; [4]Institute of Medical Genetics and Pathology, University Hospital Basel, University of Basel, Basel, Switzerland

A 39-years old patient with unremarkable medical history presented with symptoms of sinusitis unresponsive to treatment with antibiotics and topical corticosteroids, followed by episodes of epistaxis. A CT scan revealed a well-delineated tumor (2 x 4 cm) of the nasal cavity without evidence of infiltration or osseous destruction. To exclude malignancy, surgical biopsy was performed, followed by tumor debulking.

Histopathological analysis revealed a lymphocytic infiltrate composed of B and T cells, accompanied by necrotic areas, giant cells and some eosinophils. Malignancy was excluded, and the patient was referred to rheumatology. Laboratory examinations revealed high serum IgG4 (5.79 g/l) and markedly elevated PR3-ANCA levels (169 U/ml). As symptoms remained localized, oral corticosteroid therapy was initiated.

Re-evaluation of histopathology demonstrated an increased IgG4/IgG ratio of 40% although neither storiform fibrosis nor obliterative phlebitis were present. A PET-CT scan revealed multiple hypermetabolic lesions of the lungs and one in the kidney, as well as increased uptake in both submandibular glands, without evidence of aortitis.

Following initial clinical improvement, the patient developed mild hemoptysis, elevated CRP and proteinuria. The corticosteroid dose was increased, and rituximab treatment initiated.

There is increasing evidence of overlapping features between IgG4-related disease and ANCA-associated vasculitis (AAV), particularly in granulomatosis with polyangiitis (GPA). The non-destructive inflammatory mass in the nasal cavity and sialadenitis in our patient are atypical for GPA. This overlapping syndrome may represent a distinct clinical phenotype with a particularly good response to B cell-targeted therapy.

P 15

Is there a diagnostic value of bedside labial salivary gland biopsy in patients with sicca syndrome?

Wolfrum S[1], Schmiedeberg K[1,2], Förger F[1,2], Rubbert-Roth A[1]

[1]Department of Rheumatology, Cantonal Hospital St.Gallen, St. Gallen, Switzerland; [2]Department of Rheumatology and Immunology, University Hospital Bern, Bern, Switzerland

Background: Sicca symptoms affect up to 30% of individuals over 65 years, particularly women. Sjögren's disease (SjD) is a prototype autoimmune disease with lymphocytic inflammation of salivary or lacrimal glands, causing ocular or oral dryness. Classification criteria include anti-SSA autoantibodies and/or typical glandular biopsy. Bedside labial salivary gland biopsy (LSGB) offers a less invasive option for diagnosis.

Objectives: To assess LSGB's diagnostic value in a prospective sicca syndrome cohort and correlate histological results with symptoms, serology, demographics, and ultrasound (US) findings.

Methods: 31 patients underwent LSGB using SaliClick technology. US of parotid and submandibular glands was assessed by OMERACT scoring. Histopathology used Chisholm-Mason (CM) and focus score (FS). Clinical evaluation included ESSDAI, PGA, Schirmer, Saxon tests, and laboratory markers (SSA/SSB antibodies, rheumatoid factors, ANA, IgG). Pearson correlation coefficients were calculated.

Results: 18 of 31 patients (58%) were diagnosed with SjD. Among them, 6/18 (33%) had typical LSGB histology. FS strongly correlated with CM ($r = 0.796$, $p < 0.0001$). No correlation was found between US OMERACT scores and FS or CM. Anti-SSB antibody levels correlated with US-confirmed salivary gland involvement ($r = 0.802$, $p = 0.009$) and FS ($r = 0.634$, $p < 0.001$), but not with CM. Anti-SSA and rheumatoid factor IgM did not correlate with histology or US. Elevated rheumatoid factor IgA correlated with anti-SSB ($r = 0.678$, $p = 0.003$), rheumatoid factor IgM ($r = 0.831$, $p < 0.0001$), US OMERACT scores ($r = 0.937$, $p = 0.002$), and FS ($r = 0.528$, $p = 0.036$). Pathologic Saxon test results correlated with rheumatoid factor IgA ($r = -0.675$, $p = 0.011$) and hypergammaglobulinemia ($r = -0.536$, $p = 0.018$), but not with Schirmer test, US scores, or LSGB histology.

Conclusion: In this sicca syndrome cohort, minimally invasive LSGB was not routinely needed for SjD diagnosis. Non-invasive tools such as salivary gland US, Saxon test, rheumatoid factor IgA, and anti-SSB antibody levels proved useful and correlated with histological and US findings.

P 16

Prognostic value of systemic sclerosis-associated primary heart involvement

Gharibian C J[1], Lupi V[1], Gotschy A[1], Becker M O[1], Dobrota R[1], Elhai M[1], Muraru S[1], Jordan S[1], Hoffmann A M[1, 2], Distler O[1], Manka R[1], Bruni C[1, 4], Mihai C[1, 4]

[1]University Hospital of Zurich, University of Zurich, Department of Rheumatology, Zurich, Switzerland; [2]Department of Cardiology, University Hospital of Zurich, University of Zurich, Switzerland; [3]Oslo University Hospital, Department of Rheumatology, Oslo, Norway; [4]these authors have contributed equally

Background and objectives: A definition of primary heart involvement (pHI) in systemic sclerosis (SSc) was recently developed, and cardiac magnetic resonance (CMR) imaging was selected as the non-invasive diagnostic modality of choice to characterize myocardial involvement in SSc. However, the prognostic significance of SSc-pHI is insufficiently understood. In this study, we aimed to evaluate the prognostic value of a CMR-supported diagnosis of SSc-pHI in a real-life cohort of patients diagnosed with SSc by expert opinion.

Methods: We selected patients from our EUSTAR center who underwent at least one CMR and had follow-up data for at least one year or died. Based on CMR and additional cardiologic tests, patients were divided into 4 groups: no heart disease, SSc-pHI, other heart disease, and combined SSc-pHI and other heart disease. The study outcomes were 1) death of any cause and 2) cardiac events (any of: hospitalization due to heart failure, new arrhythmias, new diastolic dysfunction, new left ventricular ejection fraction <50%, new dyspnea NYHA class III or IV) during follow up. ?We performed Kaplan-Meier survival analyses with log-rank tests, as well as multivariable Cox regression models, including as dependent variables the cardiac disease groups and other risk factors for adverse prognosis in SSc.

Results: Among 182 patients, 39 (21%) were males, 54 (30%) had diffuse cutaneous SSc, 24 (13%) had pulmonary hypertension by right heart catheterization (PH), 92 (50%) had interstitial lung disease (ILD), and 33 (18%) had non-SSc related cardiac conditions already diagnosed before CMR. Patients were classified as: no heart disease (88, 48%), SSc-pHI (23, 13%), other heart disease than SSc-pHI (60, 33%), and both SSc-pHI and other heart disease (11, 6%). During a median (Q1-Q3) follow-up of 7 (3-9) years, 37 (20%) patients died and there were 6 hospitalizations due to heart failure. Regarding secondary outcomes there were 14 arrhythmias, 4 LVEF<50%, 28 diastolic dysfunction, 6 hospitalizations due to heart failure and 20 deteriorations of NYHA class. Both in Kaplan-Meier survival analysis and in Cox proportional hazards models adjusted for age, sex, significant ILD, PH, and history of SRC, SSc-pHI was an independent risk factor for cardiac events, but not for death.

Conclusion: SSc-pHI is associated with severe prognosis and is a risk factor for cardiac outcomes, independently of other concomitant heart conditions and extra-cardiac SSc manifestations.

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Predictors of Long-Term Self-Monitoring App Use in Inflammatory Rheumatic Diseases: Insights from the SCQM Registry

Brändli J[1], Raptis C[1], Riek M[1], Grabowski A[1], Finckh A[2], von Mühlenen I[3], Roulin P[4], Möller B[5], Rubber-Roth A[6], Hügle T[7], Micheroli R[8]

[1]SCQM Foundation, Zurich, Switzerland; [2]Department of Rheumatology, Geneva University Hospitals, Geneva, Switzerland; [3]Rheuma Basel Praxis, Basel, Switzerland; [4]AbbVie AG, Cham, Switzerland; [5]Department of Rheumatology and Immunology, Inselspital University Hospital, Bern, Switzerland; [6]Department of Rheumatology and Immunology, St. Gallen Cantonal Hospital, St. Gallen, Switzerland; [7]Department of Rheumatology, Lausanne University Hospital, Lausanne, Switzerland; [8]Department of Rheumatology, University Hospital Zurich, University of Zurich, Zurich, Switzerland

Background: Launched in 2016, the mySCQM app is a valuable tool for self-management for patients with rheumatoid arthritis (RA), axial spondyloarthritis (axSpA), and psoriatic arthritis (PsA) in the Swiss Clinical Quality Management (SCQM) registry. By documenting monthly patient-reported outcomes (PROs) and medication use, it enables disease tracking between consultations.

Objectives: This study aimed to (1) describe mySCQM users, (2) assess app use retention across RA, axSpA, and PsA, distinguishing regular from occasional users, and (3) identify baseline predictors of app use discontinuation.

Methods: We performed a retrospective analysis of prospectively gathered data from the SCQM registry, defining baseline as the date of the first app entry. Collected variables included sex, age (at symptom onset, diagnosis, and app start), disease duration, educational level, BMI, ESR, CRP, PtGA, and pain VAS. App retention was assessed via Kaplan-Meier estimates; discontinuation was defined as ≥6 months of inactivity. Univariate Cox models were used to evaluate predictors of discontinuation, including age, sex, education, disease duration, and PtGA. Early app engagement (1–3 vs ≥4 entries in the first six months) was also tested as a predictor.

Results: 3950 patients were included (RA: 38%, axSpA: 41%, PsA: 21%), 61% female, median age 50.3 years. Education: 11% primary, 53% secondary, 36% tertiary. Characteristics reflected typical disease profiles. Median retention across all patients was 2.5 years; 36% remained active after five years. PsA users had the highest retention, followed by RA and axSpA. Cox proportional hazards analyses suggest that older age at first app use was associated with a lower risk of app discontinuation in axSpA and PsA, but not in RA. Higher educational level (secondary or tertiary vs. primary) was consistently associated with longer app use in all three diseases. Patients who used the app regularly in the first six months had a four-fold lower risk of discontinuing self-monitoring thereafter.

Conclusion: This registry study on long-term self-observation highlights the potential of digital monitoring, especially among patients who used the app regularly early on. Level of education and age were identified as crucial predictors for longer usage. The study results provide valuable insights for optimizing digital health initiatives in inflammatory rheumatic diseases and potentially other chronic conditions.

P 18

Association of Chondrocalcinosis with disease activity and drug response in Rheumatoid Arthritis: Baseline characteristics of the Swiss Rheumatoid Arthritis Outcomes cohort

Manigold T[1], Bodmer NS[2], Rosoux E[3], Fahrni G[3], Markham D[4], Micheroli R[5], Bachmann LM[2], Braendli J[6], Becce F[3], Hügle T[4]

[1]Department of Rheumatology, Inselspital University Hospital Bern, Bern, Switzerland.; [2]Medignition, Engelstrasse 6, CH-8004 Zurich; [3]Department of Radiology, Lausanne University Hospital (CHUV), University of Lausanne (UNIL), Lausanne, Switzerland; [4]; [5]Department of Rheumatology, University Hospital Lausanne (CHUV), Switzerland; [6]Department of Rheumatology, Zurich University Hospital, University of Zurich, Zurich, Switzerland.; [7]Data Science Team, Swiss Clinical Quality Management Foundation, Zurich, Switzerland

Background: Calcium pyrophosphate deposition disease (CPPD) disease can mimic or interfere with the course of rheumatoid arthritis (RA).

Methods: We recently developed and validated a deep learning algorithm to classify the presence of chondrocalcinosis (CC) on hand radiographs, detecting the presence of CC at the TFCC, MCP-2, and MCP-3 sites with an accuracy of 0.86. In this study, we report the baseline characteristics of 1,344 RA patients of the Swiss Clinical Quality Management in Rheumatic Diseases (SCQM) registry who underwent CC assessment using this algorithm and number of therapy lines and with adequate quality of the radiographs to run the algorithm. A subgroup of patients was identified for whom the results of a clinical examination were available on the same date as the radiographs. In the event that radiographs of both hands were available, one was randomly selected. The following data were extracted: age, sex, seropositivity (RF, anti-CCP) status, number of therapy lines (four or more drugs vs. less), and DAS28 (CRP) (> 5.1 vs. below). Two multivariable logistic regression analyses were conducted to assess the association of CC presence on DAS28 scores and the number of current RA medications, with adjustments made for patients' age, sex, and serostatus.

Results: The mean age of the participants was 56.2 years (standard deviation (SD) 13.9), 954/1344 (71.0%) were female, and 916/1344 (68.2%) were seropositive. CC was present in 310 patients (23.1%) and overall not associated with the serostatus. Overall, 46 patients (3.4%) were taking at least four medications, and 82 (6.1%) exhibited high disease activity with DAS28-CRP >5.1. Overall, no association was found between CC presence and disease activity (OR 1.09 (95% CI: 0.62-1.90); p = 0.771). In multivariable analyses, CC+ patients were more likely to take at least four drugs (odds ratio (OR): 2.54 (95% confidence interval (CI): 1.21-5.32); p = 0.014) and were significantly older (CC-: 54.0 SD (13.5), CC+ 63.0 SD (13.0), p <0.001).

Discussion: In this cross-sectional analysis of baseline characteristics of a large cohort of patients with RA who underwent CC assessment, we found a fairly strong association between the presence of CC and high drug use. However, overall we did not find an association between the presence of CC and disease activity or serostatus. Additional analyses will be performed in subgroups based on e.g. age, disease duration and type of treatment.

P 19

Fear of Progression in Chronic Rheumatological Disorders: Association with Quality of Life and Perceived Stress - an Interim Analysis

Sprau P[1], Christ L[1], Klein K[1], Borner U[2], Maurer B[1], Kollert F[1,2]

[1]Department of Rheumatology and Immunology, Inselspital, Bern University Hospital, University of Bern, Bern; [2]Otolaryngology Department, Inselspital Bern, Bern, Switzerland.; [3]Department of Rheumatology, University Hospital Basel, Basel, Switzerland

Background: Fear of progression (FoP) is characterized by anxiety and negative emotions about the potential worsening of a condition over time. This fear significantly impacts mental health, social functioning, and overall wellbeing. It is a primary source of distress in patients with cancer and other chronic diseases including rheumatoid arthritis (RA) and has been validated in systemic sclerosis (SSc).

Objectives: This is an interim analysis of an ongoing study exploring FoP and predictors of FoP in Sjögren`s disease (SjD).

Methods: We prospectively included 20 patients with various chronic rheumatological diseases: 10 with SjD, 5 with RA, and 5 with SSc. FoP was measured by the short form of the FoP Questionnaire (FoP-Q-SF). In addition to patient and disease characteristics, quality of life was evaluated using the European Quality of Life 5 Dimensions 3 Levels (EQ-5D-3L) questionnaire, and perceived stress was measured with the Perceived Stress Scale (PSS).

Results: The median FoP score was 32 ± 11.5 (RA: 34.4 ± 7.0; SSc: 31.4 ± 12.7; SJD: 35 ± 13.5) (for patients` characteristics see Table 1). Forty-five percent (n = 9) of patients had FoP scores above 34, a threshold for considerable FoP commonly used in clinical trials [2]. There were no differences between rheumatological entities (all p-values >0.4). FoP was not correlated with age (r = -0.076, p = 0.749) or disease duration (r = -0.151, p = 0.525). A positive correlation was found between FoP and EQ-5D-3L (r = 0.628, p = 0.003), a negative correlation with EQ-VAS (r = -0.792, p <0.001), and a positive correlation with PSS (r = 0.798, p <0.001).

Conclusions: FoP in patients with chronic rheumatological diseases was comparable to levels observed in cancer patients. The strong connection between Fear of Progression (FoP), quality of life, and perceived stress highlights the critical need to address FoP in both medical care and research.

P 20

Gaps in chronic and acute gout care: real-world data from an electronic health record-based register

Bürgisser N[1,2,3], Mongin D[1,3,4], Buclin C[2,3], Courvoisier DS[1,3,4], Lauper K[1,3]

[1]Division of Rheumatology, Geneva University Hospitals, Geneva, Switzerland; [2]Division of General Internal Medicine, Geneva University Hospitals, Geneva, Switzerland; [3]Faculty of medicine, Geneva University, Switzerland; [4]Quality of Care Division, Geneva University Hospitals, Geneva, Switzerland

Introduction: The management of chronic and acute gout remains suboptimal in clinical practice. Guidelines strongly recommend urate-lowering therapy (ULT) for patients with recurrent flares, tophi, or uric acid stones, and the use of anti-inflammatory drugs for acute flares. However, implementation of these recommendations is unclear. This study assessed ULT use in patients with a clear treatment indication, and anti-inflammatory use during acute flares, using data from an electronic health record–based gout register at the Geneva University Hospitals.

Methods: Patient records were automatically screened for ULT indications, defined as ≥2 flares within a year, presence of tophi, or a history of uric acid stones. Use of any ULT was evaluated during the in- or outpatient encounter where indication was present, as well as at subsequent visits. Acute flares were identified by: (1) urate crystals on joint aspiration, (2) hospitalisation with a primary ICD-10 diagnosis of gout, or (3) flare documented in the problem list. Use of anti-inflammatory drugs (NSAID, colchicine, IL-1 inhibitor, or glucocorticoids) was assessed during hospitalization or within ±2 weeks of a joint aspiration or flare documentation.

Results: Among 6673 patients, 1135 events met criteria for ULT indication, primarily tophi (n = 941), followed by recurrent flares (n = 138) and uric acid stones (n = 56). ULT was prescribed in 59.1% [56.2–61.9] of cases at baseline, rising to 66.8% [64–69.5] at 1 year and 69.3% [66.5–71.9] at 2 years. At 2 years, ULT was prescribed in over two-thirds of patients with tophi, whereas just over half of those with recurrent flares or kidney stones received ULT. We identified 3770 acute flares, mostly from the problem lists. Overall, 70.1% were treated, mainly with colchicine. IL-1 inhibitors were rarely used. Treatment patterns did not differ by type of flare identification.

Conclusion: A substantial proportion of gout patients with a strong indication for ULT remain untreated, and many flares are not managed with anti-inflammatory therapy. These gaps highlight missed opportunities to reduce morbidity, pain, hospital stay and possible cardiovascular risks.

P 21

Ultrasonographic findings in patients with cystic fibrosis-associated arthropathy

Joos L[1], Haller C[1], Walter A[2], Brutsche M[2], Von Kempis J[1], Förger F[1,3], Schmiedeberg K[1,3]

[1]Division of Rheumatology and Immunology, HOCH Health Ostschweiz, Kantonsspital St.Gallen; [2]Lung Center, HOCH Health Ostschweiz, Kantonsspital St.Gallen; [3]University Hospital Bern, Department of Rheumatology and Immunology, Bern, Switzerland

Cystic Fibrosis (CF) is characterized by mutations in the CFTR (cystic fibrosis transmembrane conductance) gene that result in a non-functional chloride transporter protein. Clinical manifestations typically include pulmonary involvement, in addition, up to 29% of CF patients report musculoskeletal symptoms that are poorly characterized. Recurrent episodes of mono- or polyarthritis of hand- and feet-joints are most commonly reported. Musculoskeletal ultrasound (US) may represent a suitable imaging modality to characterize CF-associated arthropathy.

A total of 19 CF patients underwent ultrasonographic assessment of the joints (fingers, wrists, toes, and knees). The resulting grey scale images were evaluated by two examiners for the presence of synovitis. Data were analyzed by covariance (ANCOVA) models, using the general linear model approach. Categorical data were analyses with Chi-square test (Chi2). Correlation analyses were performed calculating nonparametric Spearman correlation rank coefficients.

11/19 patients (58%) were female and 5/19 (26%) were clinically considered to have CF-associated arthropathy. CF-associated arthropathy was observed more frequently in female CF patients (Chi2 p = 0.0487). In contrast to the clinical assessment, sonographic abnormalities in the joints were detected in 11/19 (58%). Patients with CF-associated arthropathy most frequently showed ultrasonographic synovitis in the wrist of the right hand compared to all other 34 joints of hand, toe, and knees (r = 0.574, p = 0.01) evaluated by US. The presence of synovitis of the right wrist correlated to the overall number of tender joints (r = 0.688, p = 0.001), swollen joints (r = 0.725, p <0.001), the presence of myalgia (r = 0.664, p = 0.002), CRP elevation (r = 0.483, p = 0.036), and increase in ESR (r = 0.548, p = 0.019). Treatment with the CFTR modulator (Trikafta) was associated with a reduced occurence of synovitis (Chi2, p <0.0001).

Synovitis confirmed by ultrasound assessment is frequently observed in CF patients with suspected arthropathy. Synovitis of the right wrist was the predominant finding in the majority of patients and was significantly associated with the number of tender and swollen joints as well as CRP and ESR elevations. Of note, a lower occurrence of wrist synovitis was found in patients with CFTR modulator therapy.

POSTERS HPR

HPR 1

Examining Rheumatoid Arthritis Care and eHealth Support in two Swiss Centres: A Contextual Analysis to develop the SQUEEZE Care Model for DMARDs adherence and Implementation Strategies

Wettengl C[1], Calado S[1], Brand-Knapp S[2], Daly ML[2], De Geest S[1,4], Deman E[2], Kyburz D[2], Manolaraki C[3], Ribaut J[1], Von Mühlenen I[3], Kocher A[1,2]

[1]Institute of Nursing Science, Faculty of Medicine, University of Basel, Basel, Switzerland; [2]Department of Rheumatology, University Hospital Basel, Basel, Switzerland; [3]Rheuma Basel, Basel, Switzerland; [4]KU Leuven, Public Health and Primary Care, Leuven, Belgium

Background: Adherence to disease-modifying antirheumatic drugs (DMARDs) in rheumatoid arthritis (RA) remains suboptimal (20–70%), influenced by complex contextual factors across multiple levels. The SQUEEZE project aims to improve adherence through an eHealth-facilitated integrated care model, with contextual analysis guiding its development, implementation and evaluation.

Objectives: This contextual analysis in two Swiss RA centres aimed to inform care model development by exploring practice patterns, multi-level contextual factors, barriers and facilitators for adherence management.

Methods: Guided by the Basel Approach for coNtextual ANAlysis (BANANA), the study used the Context and Implementation of Complex Interventions (CICI) framework to explore context-implementation-intervention interactions and the eHealth Enhanced Chronic Care Model (eCCM) to address eHealth and chronic care aspects. A rapid qualitative approach included clinical observations, semi-structured interviews with purposively recruited health professionals (n = 9), patients (n = 7) and stakeholders (n = 5), and a focused literature review. Data were systematically analysed using framework analysis with pre-defined themes.

Results: Participants and centres: Centre 1, a private clinic with 2 rheumatologists and 4 assistants, operated in a stable environment. Centre 2, a university hospital with 20 rheumatologists and 3 nurses, faced major organizational changes.

Practice patterns: Both centres prioritised patient-centred care but faced fragmentation, limited adherence monitoring tools and variable patient digital and health literacy. Centre 1 provided structured self-management support and continuity of care. Centre 2 struggled with workload, informal planning, and high turnover, affecting care continuity. Both used the Swiss Clinical Quality Management (SCQM) in Rheumatic Diseases registry/app, with varying engagement.

Barriers and facilitators: Barriers included limited reimbursement for eHealth and nurse-/medical assistant-led care, language barriers, concern about delegation, and legal issues (e.g. data protection). An aging population with comorbidities added complexity. Still, both centres were open to innovation and digital tools.

Conclusion: Shared and centre-specific factors highlight the need to tailor the SQUEEZE care model for effective implementation and sustainability. Barriers like fragmented care contrast with facilitators such as digital infrastructure and openness to change.

HPR 2

Transition from Pediatric to Adult Care from the Perspective of Parents of Young People with a Pediatric Rheumatic Disease in Switzerland: A Qualitative Study as Part of the Contextual Analysis of the HEROES (Rheumatology Transition for Young People in Switzerland) Study

Matter M[1,3], Tarr N[1], Daly ML[1,2], Wörner A[1], Daikeler T[2], Staudacher S[3,4], Berben L[1,2,4]

[1]University Children's Hospital Basel, Switzerland; [2]University Hospital Basel, Switzerland; [3]Institute of Nursing Science, University of Basel, Switzerland; [4]Contributed equally

Background: In Switzerland up to half of the 3000 children and adolescents diagnosed with a pediatric rheumatic disease need continuous medical care into adulthood. Parents often play a vital and supportive role in the transition of their children from pediatric to adult care. The transition phase requires, among other things, a complex reorganization of family roles, such as the transfer of responsibility for self-management and healthcare from parents to adolescents and young adults (AYA). Despite their central role, the perspective of parents is still under-researched. The aim of this study is to explore the experiences and needs of parents of AYA with a rheumatic disease in relation to current practices and future models of the transition process in Switzerland.

Methods: Based on qualitative research, following a rapid ethnography methodology, the project utilizes various methods: semi-structured interviews with parents, observational sequences in rheumatology consultations, and informal conversations with different stakeholders in two pediatric rheumatology centers and their adult counterpart. Data analysis follows Braun and Clarke's six phased reflexive thematic analysis.

Results: Eight interviews were conducted with a parent of an AYA with a pediatric rheumatic disease and aged between 16 and 24. AYA are at different phases of the transition process – before, during, or after transition to adult medicine. These interviews were complemented by 10 observation sessions. An initial analysis showed that parents are heavily involved in supporting their children in their disease- and self-management and in achieving autonomy and independence. Parents experience high psychosocial and emotional stress and express a desire for open and structured communication.

Conclusion(s): Parents need support in dealing with their AYA' disease-related challenges and want comprehensive information and active involvement in their care - throughout the entire transition process. Healthcare professionals are required to meet these needs through proactive, structured communication and participatory collaboration.

HPR 3

An Analysis of the Role of a Transition Coordinator from Pediatric to Adult Rheumatology as Part of the HEROES (RHEUMATOLOGY TRANSITION FOR YOUNG PEOPLE IN SWITZERLAND) study – Preliminary Results

Daly ML[1,2], Tarr N[2], Matter M[2], Wörner A[2], Daikeler T[1], Staudacher S[3], Berben L[2]

[1]Department of Rheumatology, University Hospital Basel, Basel, Switzerland; [2]University Children's Hospital Basel, Basel, Switzerland; [3]Institute of Nursing Science, University of Basel, Basel, Switzerland

Background: In Switzerland, up to half of 3000 children and adolescents diagnosed with a rheumatic disease require ongoing care into adulthood. A structured, individualized transition plan and a designated transition coordinator (TC) are key to a successful transition, according to EULAR/PReS guidelines. However, Swiss centers often face barriers, including funding for a TC. We present insights from the transitional care team at University Hospital Basel and University Children's Hospital Basel (UKBB) as part of the ongoing HEROES study.

Aim: To understand contextual factors influencing the implementation of transitional care, focusing on the TC's role.

Methods: Using rapid ethnographic methods (observation, semi-structured interviews) and Braun and Clarke's thematic analysis, we collected and analysed experiences from adolescents and young adults (AYA), parents, and healthcare professionals.

Results: The TC plays a central role by acting as an "anchor" throughout the entire transition journey—from the initial decision with the pediatric team to the AYA feeling secure in adult care. The TC bridges pediatric and adult services and remains a stable presence.

Three key contributions of the TC facilitate transition:

(1) Continuity of care: Consistent support through all consultations reassures AYAs, many of whom find it hard to leave the familiar pediatric environment. A young woman with JIA diagnosed at 1.5 years old described UKBB as her "second home." The TC's stability is vital, especially in adult care, where junior doctor turnover is high.

(2) Ease of access: AYAs value the TC's availability by phone or email, feeling comfortable to reach out for help with appointments, prescriptions, or guidance. One young woman described the TC as someone "easy to talk to when you have questions," offering holistic support beyond just medical issues.

(3) Ally and enabler: The TC combines clinical expertise with knowledge of social services and adolescent development, building empathetic, trusting relationships with AYAs and parents. One AYA stressed she preferred contacting the TC over doctors or reception due to feeling "too self-conscious."

Conclusion: The TC's role in Basel highlights the essential contribution of a dedicated coordinator in transitional care, providing continuity, accessibility, and advocacy. Ongoing research will determine if similar patterns emerge at other Swiss centers.

HPR 4

Konfektionierte Daumenschiene oder individuelle 3-D-Druck-Silikonschiene bei Rhizarthrose? Praktische Implikationen aus einer Einzel-Fall-Serie

Heigl F.[1], Szekeres KM.[1]

[1]ZET Handrehabilitation, Bern, Switzerland

Hintergrund: Die Schienenbehandlung ist ein wichtiger Bestandteil der konservativen Rhizarthrose-Therapie, da Schienen Schmerzen lindern, die Daumenfunktion verbessern und die Lebensqualität erhöhen können (Esteban Lopez et al., 2023). Die Auswahl des passenden Modells gestaltet sich im ergotherapeutischen Alltag jedoch oft schwierig, da Tragekomfort, Funktion, Wirkung und Kosten eine Rolle spielen.

Ziel: Welchen Nutzen beschreiben Klient*innen mit Rhizarthrose beim Tragen von konfektionierten Daumenschienen im Vergleich zu individuell angefertigten 3-D-Druck-Silikonschienen in Bezug auf Schmerz, Alltagsfunktion und Tragekomfort?

Methode: Wir untersuchten diese Fragen in einer kleinen strukturierten Einzel-Fall-Serie. 4 Frauen mit Rhizarthrose (46-80 Jahre) füllten zu zwei Zeitpunkten Fragebögen aus. Die Fragebögen wurden selbst zusammengestellt und enthielten numerische Fragen (zB zu Schmerz), die Patient Specific Functional Scale sowie offene Fragen zum Einsatz im Alltag und zu Vor- und Nachteilen.

Ergebnis: 3 Frauen hatten zum ersten Zeitpunkt eine Schienenversorgung durch ihre Ergotherapeut*in, eine hatte 2 Modelle (konfektionierte harte Modelle (n = 3), konfektioniertes weiches Modell (n = 1)). Die Auswertung zum 2. Zeitpunkt (6 Wochen nach Erhalt des 3DModells) zeigt einen klaren Vorteil zugunsten des 3DModells. NRS in Ruhe im Daumen: Mittelwert: Zeitpunkt 1 = 3.5, Zeitpunkt 2 = 0,1 (0 = kein Schmerz, 10 = schlimmster Schmerz). Die konfektionierten Modelle wurden v.a. bei Haus- und Gartenarbeiten gegen Schmerzen, zur Entlastung getragen. Obwohl die Modelle unterstützend waren, wurden sie auch als störend (schwitzen, reiben, zu hart, Klettverschluss) empfunden. Die 3DModelle wurden zu denselben Tätigkeiten getragen, ausserdem beim Kochen, bei künstlerischen, therapeutischen Tätigkeiten und beim Autofahren. Das 3DModell wurde durchwegs bevorzugt.

Implikationen: Die Ergebnisse weisen darauf hin, dass das 3DModell deutlich bequemer ist und einen höheren Tragekomfort hat. Vermutlich wird es darum im Alltag mehr getragen und führt zu einer stärkeren Schmerzreduktion. Da dieses Modell allerdings massiv viel teurer ist (20x), muss mit den Klient*innen gut abgewogen werden, welcher Kosten-Nutzen-Effekt erwünscht ist.

Referenz:

– Esteban Lopez, L.M., Hoogendam, L., Vermeulen, G.M., Tsehaie, J., Slijper, H.P., Selles, R.W., & Wouters, R.M. (2023). Long-term outcomes of nonsurgical treatment of thumb carpometacarpal osteoarthritis: a cohort study. JBoneJtSurg 105(23):p 1837-1845.

HPR 5

Psychometric properties of physical fitness and function outcome measurements in persons with Myositis – a systematic review

Baschung Pfister P[1], Knols R H [1,2], de Bruin E D[3,4], Bruderer-Hofstetter M [5,6]

[1]Physiotherapy Occupational Therapy Research Centre, Directorate of Research and Education, University Hospital Zurich, Zurich, Switzerland.; [2]Department of Health Sciences and Technology, ETH Zurich, Zurich, Switzerland.; [3]Motor Control and Learning Group, Institute of Human Movement Sciences and Sport; [4]Department of Health Sciences and Technology, ETH Zurich, Zurich, Switzerland.; [5]Department of Health, OST – Eastern Swiss University of Applied Sciences; [6]St. Gallen, Switzerland.; [7]Bern University of Applied Sciences, School of Health Professions, Division of Physiotherapy; [8]Bern University of Applied Sciences, Institute on Ageing

Background: No consensus exists which outcome measurement instruments (OMIs) are adequate to evaluate physical fitness and function in persons with idiopathic inflammatory myopathy (IIM). Furthermore, the psychometric properties of commonly used OMIs in this population are criticized for being insufficiently described. The aim of this systematic review is to provide a comprehensive overview of psychometric properties of OMIs that measure physical fitness and function in adult persons with IIM and to provide recommendations for specific OMIs for research and clinical practice.

Method: A systematic literature search in eight databases was conducted. We included full-text articles in English and German evaluating performance-based or clinician-reported OMIs for physical fitness and function in adult persons with IIM. Articles including persons with inclusion body myositis, patient reported outcome measures or laboratory values, studies using OMIs as an outcome measure only, were excluded. Data extraction, risk of bias assessment and evaluation of the measurement properties were performed according to the COSMIN manual. Evidence quality was rated using a modified GRADE approach.

Results: We included eleven articles, investigating eleven OMIs with different versions: Twelve different sets of manual muscle testing, four versions of the functional index (FI), three different chair rise tests, three versions of a hand-held dynamometry (HHD), two different arm lift tests, two-minute walk distance, Barré test, Grippit, leg crossing capacity, Mingazzine test, and squatting capacity. Overall ratings of measurement properties were sufficient for measurement error of HHD (microFET2) total score and reliability of FI-3 total score, most items of the FI, grippit, and almost all muscle groups measured with different versions of the HHD had a "sufficient" overall rating. The Quality of evidence is low or very low for all measurement properties.

Discussion: Based on our results no specific OMI can be recommended for clinical practice. A substantial number and different versions of OMIs, applying different measurement protocols were investigated in the included studies. Therefore, we recommend the development and evaluation of core sets, including specific measurement protocols, to assess different constructs of physical fitness and function in persons with IIM.

HPR 6

Inflammatory Arthritis Facilitators and Barriers (IFAB) Questionnaire for Physical Activity: cross-cultural adaptation into German followed by a reliability study

Ketteler J[1], Ettlin L[2,3], Davergne T[4], Rausch-Osthoff A-K[1]

[1]Institute of Physiotherapy, Zurich University of Applied Sciences, Winterthur, Switzerland; [2]Institute of Public Health, Zurich University of Applied Sciences, Winterthur, Switzerland; [3]Ankylosing Spondylitis Association of Switzerland (SVMB), Zurich, Switzerland; [4]Department of Rehabilitation, METHODS team, CRESS UMR 1153, University of Paris Cite, France

Background: Axial spondyloarthritis (axSpA) is a chronic rheumatic disease, primarily characterized by inflammatory back pain and progressive functional limitations. Physical activity (PA) and exercise are essential parts of managing axSpA, yet the European Alliance of Associations for Rheumatology (EULAR) recommendations for PA are rarely achieved. The Inflammatory Arthritis Facilitators and Barriers (IFAB) Questionnaire is a measurement tool for PA-related facilitators and barriers in rheumatic diseases. Until now, no German version has been published. Therefore, this study aimed to culturally adapt the IFAB into German (IFAB-G) and assess its reliability among individuals with axSpA living in the German-speaking part of Switzerland.

Methods: The IFAB was initially translated using the TRAPD method (Translation, Review, Adjudication, Pretest, Documentation), involving experts and patients from Austria, Switzerland and Germany. Next, a cross-sectional study in a test-retest design was conducted, including statistical reliability analysis of internal consistency, the intraclass coefficient (ICC), the standard error of measurement (SEM), the minimal detectable change (MDC), floor and ceiling effects and the limits of agreement (LOA) for the IFAB-G. Data was collected via an online survey.

Results: The IFAB was successfully translated into the German language. Minor adjustments were required during translation and adaptation. For test-retest reliability 55 individuals (mean age 57.5 years with SD = 13.1 and 25.5% male) with axSpA were statistically analyzed. The internal consistency was satisfactory, indicated by Cronbach alpha (α = 0.64). Relative test-retest reliability was calculated using ICC = 0.72 [95% CI 0.57; 0.83]), signifying a moderate level of agreement, with the SEM to be 8.56 while MDC was determined at 23.75. No floor or ceiling effects were observed in the global scores. The differences between baseline and retest total scores fell, apart from two, within the LOA.

Conclusion: This study demonstrates that the IFAB-G is a reliable instrument for identifying barriers and facilitators of PA, thereby contributing to optimize disease management in axSpA. With minimal missing values (n = 4) and a completion time of less than 5 minutes (mean = 37.13 seconds) it is suitable in both clinical settings and research studies.

Keywords: axial spondyloarthritis, facilitators, barriers, physical activity, questionnaire, translation, reliability

INDUSTRY POSTERS

IP 1

Real-World Effectiveness of Romosozumab: A Systematic Literature Review

Langdahl B[1], Adami G[2], McClung M[3], Ebina K[4], Smith J[5], Colgan S[6], Timoshanko J[7]

[1]Aarhus University Hospital and Aarhus University, Aarhus, Denmark; [2]University of Verona, Verona, Italy; [3]Oregon Osteoporosis Center, Portland, Oregon, USA; [4]Osaka University, Osaka, Japan; [5]Costello Medical, Cambridge, UK; [6]Amgen, Thousand Oaks, California, USA; [7]UCB, Slough, UK

Objectives: To summarise observational, real-world evidence for use of romosozumab.

Methods: A systematic literature review was conducted according to PRISMA guidelines. MEDLINE, Embase and relevant conference proceedings were searched to 2nd December 2024 for observational studies of patients receiving romosozumab reporting effectiveness outcomes.

Results: The SLR identified 613 records, of which 54 unique studies across 12 countries were included. The majority were retrospective cohort studies (n = 33) and 20/54 were comparative. Numbers of patients ranged from 10 to 16,125 for romosozumab and 21 to 33,057 for comparators, with denosumab and teriparatide most commonly reported. Mean patient age ranged from 52.3 to 84.4 years. Across both romosozumab and comparator arms, mean bone mineral density (BMD; T-score) at baseline ranged from –3.80 to –1.70 at the lumbar spine, –3.10 to –2.20 at the total hip, and –3.70 to –2.20 at the femoral neck. Mean percentage change in lumbar spine BMD at 12 months ranged from 6.80% to 15.60% and 1.30% to 10.20% for patients treated with romosozumab and comparators, respectively. Mean percentage change in total hip BMD ranged from –0.90% to 6.60% (romosozumab) and –0.90% to 3.60% (comparators) with similar changes in femoral neck BMD. Romosozumab was associated with significant improvements in BMD at 12 months versus baseline in 15/15 (lumbar spine), 11/12 (total hip) and 11/14 (femoral neck) studies. BMD gains in treatment-

naïve patients were significantly larger compared with previously treated patients, in 6/9 (lumbar spine), 4/8 (total hip) and 2/6 (femoral neck) studies.

Conclusions: Across real-world data romosozumab improved BMD and demonstrated larger BMD gains versus comparators at 12 months. However, effectiveness was reduced in those previously treated with osteoporosis medications, highlighting the importance of treatment sequencing.

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IP 2

Romosozumab and Teriparatide in Daily Practice: A Retrospective Analysis of German Prescriptions Claims Data

Hermsen C[1], Elian A[2], Schiener C[2], Pannen HD[1], Möckel L[1]

[1]UCB, Monheim am Rhein, Germany; [2]Insight Health GmbH, Waldems-Esch, Germany

Background: Romosozumab and teriparatide are bone forming agents recommended for the treatment of patients at very high risk of fracture.1 We describe patient characteristics and treatment persistence in patients treated with romosozumab or teriparatide in Germany.

Methods: A retrospective analysis of German prescription claims from the Insight Health database covering prescriptions of approximately 64 million statutorily health insured patients. Patients with ≥1 prescription of romosozumab or teriparatide between January 2017 – October 2023 were included. 12-months persistence was analysed between March 2020 – October 2023, using 90- and 180-day drop-out criteria without censoring for patients lost to follow-up at the end of the study period.

Results: A total of 2,252 patients with romosozumab prescriptions and 4,927 patients with teriparatide prescriptions were included. Patients receiving romosozumab were most commonly aged 60-69 years (34.6%) and 70-79 years (26.9%); patients receiving teriparatide were mostly aged 80+ years (32.0%) and 70-79 years (25.7%). Only 4.0% of patients treated with romosozumab and 11.9% treated with teriparatide were treatment naïve (i.e. not switched from prior anti-osteoporotic treatment). For both romosozumab and teriparatide patients the most frequent treatments were alendronate (33.6% and 35.0% respectively), denosumab (20.2% and 16.0%) and the bisphosphonate ibandronate (16.1%) for romosozumab and risedronate (15.1%) for teriparatide. At 12 months, applying the 90 days drop-out criterion persistence was 65.5% in patients taking romosozumab and 52.6% for teriparatide. With the 180-days drop-out criterion, 12-months persistence was 67.2% for romosozumab and 56.8% for teriparatide. The most frequent follow-up therapies after romosozumab were denosumab (51.0%), zoledronate (17.8%) and alendronate (13.5%). After teriparatide most common follow-up treatments were denosumab (42.6%), alendronate (17.3%) and zoledronate (10.6%).

Conclusion: In this patient population from a German database, patients treated with romosozumab were younger than patients treated with teriparatide and showed numerically higher persistence. In contrast to the new DVO guideline recommendations of starting with a bone forming agent,1 most patients received a prior anti-osteoporotic medication before treatment with romosozumab or teriparatide.

Funding: UCB and Amgen. Previously presented at DVO 2025.

Reference:

1. DVO Leitlinie Osteoporose 2023

IP 3

Efficacy of two years of treatment with anti-IL-5/R therapy for reduction in use of oral glucocorticoids in patients with eosinophilic granulomatosis with polyangiitis

Roufosse F[1], Nair P[2], Hellmich B[3], Bourdin A[4], Jackson DJ[5], Jayne DRW[6], Terrier B[7], Khalidi N[2], Börjesson Sjö L[8], Lal A[9], Necander S[8], Olinger L[10,11], Shavit A[12], Merkel PA[13], Wechsler ME[14]

[1]Department of Internal Medicine, Hôpital Erasme, Université Libre de Bruxelles, Brussels, Belgium; [2]Division of Respirology, Department of Medicine, McMaster University, Hamilton, ON, Canada; [3]Klinik für Innere Medizin, Rheumatologie, Pneumologie, Nephrologie und Diabetologie, Medius Kliniken, Akademisches Lehrkrankenhaus der Universität Tübingen, Kirchheim unter Teck, Germany; [4]Department of Respiratory Diseases, University of Montpellier, CHU Montpellier, PhyMedExp, INSERM, CNRS, Montpellier, France; [5]Guy's Severe Asthma Centre, Guy's and St Thomas' NHS Trust, and School of Immunology and Microbial Sciences, King's College London, London, UK; [6]Department of Medicine, University of Cambridge, Cambridge, UK; [7]Department of Internal Medicine, National Referral Center for Rare Systemic Autoimmune Diseases, Hospital Cochin, Paris, France and Université Paris Cité, Paris, France; [8]Late-stage Respiratory & Immunology, BioPharmaceuticals R&D, AstraZeneca, Gothenburg, Sweden; [9]Respiratory & Immunology, AstraZeneca, Bengaluru, Karnataka, India; [10]Late-Stage Development, Respiratory and Immunology, BioPharmaceuticals R&D, AstraZeneca, Cambridge, UK; [11]Cytel, Waltham, MA, USA; [12]BioPharmaceutials Medical, AstraZeneca, Cambridge, UK; [13]Division of Rheumatology, University of Pennsylvania, Philadelphia, PA, USA; [14]Department of Medicine, National Jewish Health, Denver, CO, USA

Background: Oral glucocorticoids (OGCs) are an essential component of first-line treatment for eosinophilic granulomatosis with polyangiitis (EGPA); however, long-term use is associated with adverse events and toxicity. The 52-week double-blind period of the MANDARA trial (NCT04157348) demonstrated non-inferiority of benralizumab versus mepolizumabto achieve remission in patients with EGPA. Additionally, more benralizumab- than mepolizumab-treated patients were able to completely withdraw from OGCs. This post hoc analysis explores the effect of these therapies on OGC-sparing over 2 years, combining data from the double-blind period and Year 1 of the ongoing open-label extension (OLE).

Methods: Patients who completed the double-blind period entered the OLE and either continued benralizumab (benra/benra) or switched from mepolizumab to benralizumab (mepo/benra). During the study, investigators were encouraged to taper OGCs for patients with no active EGPA symptoms (Birmingham Vasculitis Activity Score [BVAS] = 0), according to standard practice and clinical judgement.

Results: In total, 128 patients entered the OLE (n = 66 benra/benra, n = 62 mepo/benra; mean 52.8 years; 60.2% female), and 119 completed OLE Year 1. At baseline, the total median OGC dose was 10.0 mg/day. The median (IQR) OGC dose at Weeks 101–104 was 0.5 (0–5) mg/day in benra/benra and 1.36 (0–5) mg/day in mepo/benra patients. At Weeks 49–52, 27 (40.9%) benra/benra and 16 (25.8%) mepo/benra patients had withdrawal of OGCs. Withdrawal of OGCs was durable over the first year of the OLE in benra/benra patients to Week 101–104 (29 [43.9%]) and the proportion of mepo/benra patients that had withdrawal from OGCs increased (27 [43.5%]) to a similar proportion as benra/benra patients by Weeks 101–104. Twenty-six (39.4%) benra/benra patients and 17 (27.5%) mepo/benra patients had >52 weeks accrued duration of complete OGC withdrawal from the combined two year double-blind and OLE periods. The total mean (SD) cumulative OGC dose decreased from 1996 (1113) mg at Week 52 to 1230 (1355) mg (median [IQR] 900 [0–1941] mg) at Week 104; and from 1906 (1063) mg to mean (SD) 858 (1109) mg (median [IQR] 332 [0–1457] mg) for OGCs prescribed for EGPA.

Conclusions: Treatment of EGPA for two years with anti-IL-5/R therapies was associated with a durable reduction in OGC use.

Mepolizumab-treated patients who switched to benralizumab experienced additional benefit regarding complete withdrawal of OGCs.

IP 4

Efficacy of Two Years of Treatment with Anti-IL-5/R Therapy for Achieving Glucocorticoid-Free Sustained Remission in Eosinophilic Granulomatosis with Polyangiitis

Merkel PA[1], Agmon-Levin N[2], Jackson DJ[3,4], Jayne DRW[5], Pagnoux C[6,7], Specks U[8], Finzel S[9], Börjesson Sjö L[10], Lal A[11], Necander S[12], Shavit A[13], Walton C[14], Wechsler ME[15]

[1]Division of Rheumatology, Department of Medicine, and the Division of Epidemiology, Department of Biostatistics, Epidemiology, and Informatics, University of Pennsylvania, Philadelphia, PA, USA; [2]Department of Clinical Immunology, Angioedema and Allergy, Sheba Medical Center, Ramat Gan, Israel; [3]Guy's Severe Asthma Centre, Guy's and St Thomas' NHS Trust, London, UK; [4]School of Immunology and Microbial Sciences, King's College London, London, UK; [5]Department of Medicine, University of Cambridge, Cambridge, UK; [6]Mount Sinai Hospital, University Health Network, Toronto, ON, Canada; [7]Canadian Vasculitis Research Network (CanVasc), Toronto, ON, Canada; [8]Division of Pulmonary and Critical Care Medicine, Department of Medicine, and Thoracic Research Disease Unit, Mayo Clinic College of Medicine and Science, Rochester, MN, USA; [9]Department of Rheumatology and Clinical Immunology, University Medical Center Freiburg, Freiburg, Germany; [10]Late-stage Respiratory & Immunology, BioPharmaceuticals R&D, AstraZeneca, Gothenburg, Sweden; [11]Respiratory & Immunology, AstraZeneca, Bengaluru, Karnataka, India; [12]Late-stage Respiratory & Immunology, BioPharmaceuticals R&D, AstraZeneca, Gothenburg, Sweden; [13]BioPharmaceutials Medical, AstraZeneca, Cambridge, UK; [14]Late-stage Respiratory & Immunology, BioPharmaceuticals R&D, AstraZeneca, Cambridge, UK; [15]Department of Medicine, National Jewish Health, Denver, CO, USA

Background: Treatment for eosinophilic granulomatosis with polyangiitis (EGPA) typically relies on oral glucocorticoids (OGCs); however, OGCs are linked to adverse events, and relapses are common during tapering. The 1-year double-blind (DB) period of the MANDARA trial (NCT04157348) demonstrated non-inferiority of benralizumab versus mepolizumab in achieving remission (Birmingham Vasculitis Activity Score [BVAS] = 0, OGCs ≤4 mg/day) in patients with EGPA. This analysis evaluates the effect of anti-IL-5/R therapies on achieving a stringent definition of remission off OGCs, combining data from the DB period and Year 1 of the ongoing open-label extension (OLE).

Methods: Following the DB period, patients could enter the OLE, during which they continued benralizumab (benra/benra) or switched from mepolizumab to benralizumab (mepo/benra). Remission off OGCs was defined as BVAS = 0, OGC dose = 0 mg/day, and no relapses during the trial up to Week 104.

Results: At Week 104, 45/128 (35.2%) achieved remission off OGCs. The adjusted rate of remission off OGCs was 34.0% in the benra/benra group and 36.3% in the mepo/benra group (difference: −2.33, 95% CI: −18.33, 13.67; p = 0.7751). At Week 104, the adjusted rates showed that 83.4% in benra/benra and 87.1% in mepo/benra had a BVAS = 0; 47.3% in benra/benra and 44.8% in mepo/benra had discontinued OGCs; and 59.4% in benra/benra and 56.0% in mepo/benra had no relapses over 2-years of treatment. Over two years of treatment, 22/66 (33.3%) benra/benra and 16/62 (25.8%) in mepo/benra achieved and maintained this stringent definition of remission for 52 weeks or more. At Week 104, patients achieving remission off OGCs were more likely to have a baseline OGC dose of <12 mg/day (86.7% [39/45] vs 71.1% [59/83]), to have experienced 0–1 relapses in the prior two years (57.8% [26/45] vs 44.6% [37/83]) and to be ANCA-positive (33.3% [15/45] vs 24.1% [20/83]) compared with those not achieving remission. More patients achieving remission did not receive immunosuppressive therapy at baseline compared with those not achieving remission (73.3% [33/45] vs 57.8% [48/83]).

Conclusions: Over a third of patients with EGPA treated with anti-IL-5/R therapies for two years achieved a stringent definition of remission, characterised by no relapses, no active disease, and no requirement for OGCs. These data suggest that discontinuation of OGCs while avoiding relapses is achievable with targeted anti-IL-5/R therapy and sets a new treatment goal.

IP 5

Kidney-related outcomes with obinutuzumab in patients with active lupus nephritis: A pre-specified exploratory analysis of the REGENCY study

Schindler T[1], Rovin B[2], Iii W[3], Lightstone L[4], Daugas E[5], Furie R[6], Omachi T[3], Hassan I[7], Henes J[8], Martins E[1], Garg J[3], Quintana L[9], Leszczynski P[10], Malvar A[11]

[1]F. Hoffmann-La Roche Ltd., Basel, Switzerland; [2]The Ohio State University College of Medicine, Columbus, United States; [3]Genentech, Inc., South San Francisco, United States; [4]Imperial College London, London, United Kingdom; [5]Hospital Bichat - Claude-Bernard, Paris, France; [6]Northwell Health, Great Neck, United States; [7]Hoffmann-La Roche Ltd., Mississauga, Canada; [8]University Hospital Tuebingen, Tuebingen, Germany; [9]Hospital Clinic, Barcelona, Spain; [10]Poznan University of Medical Sciences, Poznan, Poland; [11]Organización Médica de Investigación, Buenos Aires, Argentina

Introduction: Lupus nephritis (LN) is the most common, severe organ-threatening manifestation of systemic lupus erythematosus. The randomised, double-blind, placebo-controlled, Phase III REGENCY study (NCT04221477) demonstrated superiority of obinutuzumab over placebo in achieving complete renal response at Week 76 when added to standard therapy (mycophenolate mofetil plus glucocorticoids) in patients with active LN. The effects of obinutuzumab on time to LN flare, time to an unfavourable kidney outcome and annualised estimated glomerular filtration rate (eGFR) slope during the REGENCY study are assessed.

Methods: This pre-specified analysis, assessed time to LN flare between Weeks 24–76 by Cox regression. The composite outcome of death, doubling of serum creatinine or treatment failure was defined as an unfavourable kidney outcome. Time to an unfavourable kidney outcome from baseline–Week 76 was assessed by Cox regression after stratifying for race and region. Linear mixed-effects modelling was used to assess eGFR slope between Weeks 12–76. Analyses were not controlled for type I error.

Results: Between Weeks 24–76, the proportion of patients with LN flare was lower in the obinutuzumab arm (11.1%) than in the placebo arm (23.5%), with a hazard ratio (HR) of 0.44 (95% confidence interval [CI] 0.24–0.82; P = 0.0074). The proportion of patients with unfavourable kidney outcomes in the obinutuzumab arm (8.10%) was also lower than in the placebo arm (21.30%), with an HR of 0.37 (95% CI 0.18–0.75; P = 0.0039). Numerical attenuation of eGFR decline from Week 12–76 was observed in the obinutuzumab arm with the annualised eGFR slope calculated as −0.71 (standard error [SE] = 1.454) compared with −4.39 (SE = 1.454) in the placebo arm, with a difference in eGFR slope of 3.68 (SE = 2.055; P = 0.0732), favouring patients treated with obinutuzumab.

Conclusion: This pre-specified exploratory analysis of the REGENCY study demonstrated that obinutuzumab significantly reduced the occurrence of LN flares and unfavourable kidney outcomes and attenuated the annualised decline in kidney function compared with placebo-treated patients. Together with the significantly higher proportion of patients achieving a complete renal response in the obinutuzumab arm, these findings suggest that obinutuzumab affords long-term kidney survival benefits compared with standard therapy.

IP 6

Living with Systemic Lupus Erythematosus in Switzerland: Self-reported Quality of Life and its determinants in the Lupus IMPACT Survey

Yaghmaei S[1], Schulz J[2], Schmiedeberg K[3], Trendelenburg M[2], von Kempis J[3], Balbo Pogliano C[1], Wörner PM[1], Langer P[1], Chizzolini C[4]

[1]AstraZeneca AG, Medical affairs, Baar, Switzerland; [2]Division of Internal Medicine, University Hospital Basel, 4031 Basel, Switzerland.; [3]Division of Rheumatology and Immunology, Department of Internal Medicine, Kantonsspital St. Gallen, 9000 St. Gallen, Switzerland.; [4]Department of Pathology and Immunology, Centre Médical Universitaire, University of Geneva, Geneva, Switzerland.

Quality of life (QoL) is a multifaceted concept involving physical, mental, and social well-being. In systemic lupus erythematosus (SLE) patients, QoL is heavily impacted due to the disease's diverse and debilitating effects. Remission is often associated with physical but not mental QoL, indicating potential discordance between patient and physician's expectations perceptions. This study aims to describe QoL-related disease burdens and explore its determinants, including disease coping mechanisms, among Swiss SLE patients.

In this cross-sectional study, patients were invited to participate in an online survey via digital ads, a patient organization newsletter, and a letter from the Swiss SLE Cohort Study. Inclusion criteria were self-reported SLE diagnosis, age 18+, and living in Switzerland. Disease burden was assessed using the LupusPRO™ instrument, measuring SLE's impact on QoL across 7 domains with scores from 0 to 100. Coping mechanisms were assessed using the Brief COPE inventory. The median was used to determine high and low QoL, and multiple linear regression explored associations between QoL, coping mechanisms, and other factors (SwissEthics approval: 2023-0192).

Between February and June 2024, 146 predominantly female (85.6%) and Caucasian (76.7%) patients were recruited, with a median age of 48.5 and an SLE duration of 12 years. Common SLE medications included antimalarials (73.3%), immunosuppressants (36.3%), and glucocorticoids (34.2%). Patients with low QoL more frequently used painkillers and antidepressants ($P < 0.01$) as compared to patients with high QoL. The overall LupusPRO™ score was 55.9, with emotional health scoring lowest (33.9) and body image highest (66.7). Problem-focused coping prevailed in 74% of patients, with acceptance as the most preferred coping style. Regression analysis showed a significant negative correlation between HRQoL and self-reported disease activity ($p < 0.01$), avoidant coping ($p < 0.05$), daily pill intake, and the presence of recent flare ($p < 0.01$).

Compared to the literature, Swiss SLE patients exhibit relatively low health-related QoL, especially driven by the emotional and cognitive domains. High disease activity, avoidant coping strategies, daily pill intake, and the presence of recent flares are predictors of decreased QoL suggesting that interventions such as promoting adaptive coping strategies, focusing on problem-solving and acceptance, might enable SLE patients to improve their well-being.

IP 7

Inhibition of radiographic progression with bimekizumab treatment observed in bDMARD-naïve patients with active psoriatic arthritis at 2 years: Results from a phase 3 study and its open-label extension

Coates LC[1], Husni ME[2], Kishimoto M[3], Rahman P[4], Sewerin P[5], Soriano ER[6], Ink B[7], Bajracharya R[7], Coarse J[8], Mease PJ[9], Nash P[10]

[1]University of Oxford & Oxford Biomedical Research Centre, Oxford University Hospitals NHS Trust, Oxford, UK; [2]Cleveland Clinic, Cleveland, Ohio, USA; [3]Kyorin University School of Medicine, Tokyo, Japan; [4]Craig L. Dobbin Genetics Research Centre, Memorial University of Newfoundland, St John's, Canada; [5]Rheumazentrum Ruhrgebiet, University Hospital of the Ruhr University Bochum, Herne, Germany; [6]University Institute Hospital Italiano de Buenos Aires, Buenos Aires, Argentina; [7]UCB, Slough, UK; [8]UCB, Morrisville, North Carolina, USA; [9]Providence-Swedish Medical Center and University of Washington, Seattle, Washington, USA; [10]School of Medicine, Griffith University, Brisbane, Australia

Introduction: Minimal changes in radiographic progression were observed in bimekizumab (BKZ)-treated PsA patients (pts) to 1-year (yr). We assess 2-yr radiographic progression with BKZ in bDMARD-naïve pts with active PsA in BE OPTIMAL and its open-label extension (OLE).

Methods: BE OPTIMAL assessed BKZ160mg every 4 weeks (wks; Q4W) in PsA pts and was placebo(PBO)-controlled to Wk16 pre-BKZ switch (PBO/BKZ); a reference arm (adalimumab[ADA] 40mg Q2W), switching to BKZ at Wk52 (ADA/BKZ) was included. Wk52-completers could enter OLE (BE VITAL; BKZ160mg Q4W). Radiographic progression assessed on plain hand and feet radiographs using van der Heijde modified Total Sharp Score (vdHmTSS; score:0–528), quantifying joint damage based on erosions and joint space narrowing (JSN). Radiographs read centrally and independently by two readers, blinded to treatment and time of films. 2-yr campaign readings taken at baseline (BL) and Wk104. At Wk104, PBO/BKZ, BKZ-randomised and ADA/BKZ pts received 88/104/52wks of BKZ. Data reported for overall radiographic set and at-risk set (subgroup at higher risk of progression; high-sensitivity-CRP≥6mg/L and/or ≥1 bone erosion at BL): mean change from BL (CfB) in vdHmTSS, mean CfB in vdH Erosions and JSN sub-scores, cumulative probability of vdHmTSS CfB and proportion with no radiographic progression (vdHmTSS CfB≤0.5/≤0.0) at 2 yrs. Data reported for pts with Wk104 radiographs (observed case).

Results: 664/852 pts in overall radiographic set (221[PBO/BKZ], 343[BKZ], 100[ADA/BKZ]) and 566/852 in at-risk set (186[PBO/BKZ], 296[BKZ], 84[ADA/BKZ]) had radiographs at BL and Wk104. BL vdHmTSS scores were similar across arms. Minimal radiographic progression to Wk104 in overall radiographic set (vdHmTSS mean CfB[SD]:0.08[2.05] PBO/BKZ, 0.07[1.43] BKZ, 0.06[2.01] ADA/BKZ) and at-risk set (0.08[2.23] PBO/BKZ, 0.07[1.53] BKZ, 0.02[2.19] ADA/BKZ). Many pts experienced no radiographic progression (vdHmTSS CfB≤0.5) at Wk104, in overall radiographic set (79.4%[PBO/BKZ], 84.2%[BKZ], 82.8%[ADA/BKZ]) and at-risk set (76.1%[PBO/BKZ], 82.4%[BKZ], 81.9%[ADA/BKZ]). Most pts had minimal change in vdHmTSS score at 2 yrs. Minimal changes in mean vdH Erosions and JSN sub-scores observed at 2 yrs across arms (both sets).

Conclusion: Inhibition of radiographic progression observed at 2 yrs with BKZ in bDMARD-naïve pts with active PsA. Majority pts experienced no radiographic progression, despite original randomisation.

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IP 8

Bimekizumab, a dual inhibitor of IL-17A and IL-17F, demonstrated long-term safety and efficacy in biologic dMARD-naïve patients with active psoriatic arthritis: Final 3-year results from the phase 3 BE OPTIMAL study and its open-label extension

Gossec L[1], Coates LC[2], McInnes IB[3], Mease PJ[4], Ritchlin CT[5], Tanaka Y[6], Asahina A[7], Ink B[8], Bajracharya R[8], Coarse J[9], Merola JF[10]

[1]Sorbonne Universite and Pitie-Salpetriere Hospital, Paris, France; [2]University of Oxford & Oxford Biomedical Research Centre, Oxford University Hospitals NHS Trust, Oxford, UK; [3]University of Glasgow, College of Medical Veterinary and Life Sciences, Glasgow, UK; [4]Providence-Swedish Medical Center and University of Washington, Seattle, Washington, USA; [5]University of Rochester Medical School, Rochester, New York, USA; [6]University of Occupational and Environmental Health, Japan, Kitakyushu, Fukuoka, Japan; [7]The Jikei University School of Medicine, Tokyo, Japan; [8]UCB, Slough, UK; [9]UCB, Morrisville, North Carolina, USA; [10]UT Southwestern Medical Center, Division of Rheumatology, Dallas, Texas, USA

Introduction: Bimekizumab (BKZ), an IL-17A/F inhibitor, demonstrated sustained and consistent efficacy and safety to 2 years (yrs) in PsA patients (pts) who were bDMARD-naïve. We assess 3-yr efficacy and safety of BKZ in bDMARD-naïve PsA pts.

Methods: In BE OPTIMAL, pts were randomised to BKZ (160mg;every 4 weeks [wks; Q4W]), placebo (PBO) or reference arm (adalimumab [ADA]40mg Q2W). PBO-and ADA-randomised pts switched to BKZ at Wk16 (PBO/BKZ) and Wk52 (ADA/BKZ), respectively. Wk52-completers could enter BE VITAL (open-label extension). Efficacy outcomes reported to Wk160 for BKZ Total group (PBO/BKZ and BKZ-randomised pts). Data reported using modified non-responder/multiple/worst-category imputation. mNRI considered visits post-discontinuation due to adverse events or lack of efficacy as non-response; multiple imputation used for other missing data and response derived from imputed values. Safety data reported to Wk156 for BKZ-treated pts (≥1 BKZ dose).

Results: 654/852 (76.8%) completed Wk160 (546/712[76.7%] in BKZ Total group). Across all efficacy outcomes, clinical responses were sustained through 3-yrs. Sustained clinical response rates from Wk52–160 were observed for ACR50 (56.1%–53.2%); complete skin clearance (PASI100; 64.7%–61.9%); minimal disease activity (56.7%–52.9%) and swollen joint count resolution (SJC = 0; 61.8%–59.5%). ADA/BKZ pts demonstrated similar sustained responses through 3 yrs. Incidence (exposure-adjusted incidence rate[EAIR]/100 pt-years[PY]) of ≥1 treatment-emergent adverse event (TEAE) was 164.2; for serious TEAEs: 6.5. Most frequent TEAEs were SARS-CoV-2 (COVID-19) (EAIR/100 PY: 12.7), nasopharyngitis (7.8) and upper respiratory tract infection (6.1). EAIR/100 PY was low for adjudicated major adverse cardiovascular events (0.5), serious infections (1.4), adjudicated definite or probable inflammatory bowel disease (0.4), malignancies (excluding non-melanoma skin cancer; 0.5), adjudicated suicidal ideation/behaviour (0.1) and hepatic events (5.7). Three deaths deemed unrelated to treatment reported. Fungal infections (9.2) were localised (majority Candida infections; 5.7). Most Candida infections were oral candidiasis (4.3); one serious (oropharyngeal candidiasis) reported. Discontinuations due to Candida infections were low (n = 7; 0.4).

Conclusion: BKZ demonstrated sustained efficacy to 3 yrs in bDMARD-naïve PsA pts. BKZ was well tolerated with no new safety signals observed.

Funding: UCB.

Previously submitted: EULAR 2025.

IP 9

Dual inhibition of IL-17A and IL-17F with bimekizumab demonstrated long-term safety and efficacy in patients with active psoriatic arthritis and prior inadequate response to tumour necrosis factor inhibitors: Final 3-year results from the phase 3 BE COMPLETE study and its open-label extension

McInnes IB[1], Merola JF[2], Coates LC[3], Gossec L[4], Landewé R[5], Proft F[6], Tanaka Y[7], Asahina A[8], Ink B[9], Bajracharya R[9], Coarse J[10], Mease PJ[11]

[1]University of Glasgow, College of Medical Veterinary and Life Sciences, Glasgow, UK; [2]UT Southwestern Medical Center, Division of Rheumatology, Dallas, Texas, USA; [3]University of Oxford & Oxford Biomedical Research Centre, Oxford University Hospitals NHS Trust, Oxford, UK; [4]Sorbonne Universite and Pitie-Salpetriere Hospital, Paris, France; [5]Amsterdam Rheumatology & Clinical Immunology Center, and Zuyderland MC, Amsterdam, The Netherlands; [6]Charité-Universitätsmedizin Berlin; Freie Universität Berlin & Humboldt-Universität zu Berlin, Berlin, Germany; [7]University of Occupational and Environmental Health, Japan, Fukuoka, Japan; [8]The Jikei University School of Medicine, Tokyo, Japan; [9]UCB, Slough, UK; [10]UCB, Morrisville, North Carolina, USA; [11]Providence-Swedish Medical Center and University of Washington, Seattle, Washington, USA

Introduction: Bimekizumab (BKZ), an IL-17A/F inhibitor, has demonstrated sustained and consistent efficacy and safety to 2 years (yrs) in PsA patients (pts) who had prior inadequate response/intolerance to tumour necrosis factor inhibitors (TNFi-IR). We assess 3-yr efficacy and safety of BKZ in TNFi-IR PsA pts.

Methods: In BE COMPLETE, pts were randomised to BKZ (160mg;every 4 weeks [Q4W]) or placebo (PBO). Week (Wk)16-completers could enter BE VITAL (open-label extension [OLE]) to 140 wks. At Wk16, PBO pts entering OLE switched to BKZ (PBO/BKZ). Efficacy outcomes reported to Wk156 for BKZ Total group (PBO/BKZ and BKZ-randomised pts). Missing data imputed using modified non-responder/multiple/worst-category imputation. mNRI considered visits post-discontinuation due to adverse events or lack of efficacy as non-response; multiple imputation used for other missing data and response derived from imputed values. Safety data reported to Wk156 for BKZ-treated pts (≥1 BKZ dose).

Results: 299/400 (74.8%) completed Wk156. Patients demonstrated sustained clinical responses across efficacy outcomes through 3 yrs. Sustained response rates from Wk52–156 were observed for ACR50 (50.4%–55.2%); complete skin clearance (PASI100) response [66.2%–67.5%]); swollen joint count resolution (SJC = 0; 58.2%– 59.1%) and Disease Activity Index for Psoriatic Arthritis low disease activity/remission (56.3%–53.8%). Minimal disease activity achievement increased Wk52–156 (43.9%–48.8%). Incidence (exposure-adjusted incidence rate [EAIR]/100 pt-years [PY]) of ≥1 treatment-emergent adverse event (TEAE) was 88.6; for serious TEAEs: 5.7. Most frequent TEAEs were SARS-CoV-2 (COVID-19; 7.6), nasopharyngitis (4.8) and upper respiratory tract infection (4.1). EAIR/100 PY was low for adjudicated major adverse cardiovascular events (0.2), serious infections (1.3), adjudicated definite or probable inflammatory bowel disease (0.1) and malignancies (excluding non-melanoma skin cancer; 1.0). No adjudicated suicidal ideation/behaviour reported. 40 pts had hepatic events (4.3). One death deemed unrelated to treatment reported. Fungal infections (5.8) were localised (majority Candida infections [4.0]). Most were oral (3.6), mild/moderate intensity and none serious. Low discontinuations due to Candida infections (n = 4; 0.4).

Conclusion: BKZ results in sustained efficacy to 3 yrs in TNFi-IR PsA pts. BKZ was well tolerated with no new safety signals observed.

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IP 10

Low uveitis rates in patients with axial spondyloarthritis or psoriatic arthritis treated with bimekizumab: Long-term results from phase 2b/3 trials

van der Horst-Bruinsma IE[1], Brown MA[2], van Gaalen F[3], Haroon N[4], Gensler LS[5], Marten A[6], Manente M[7], Stojan G[8], Vaux T[9], White K[9], Deodhar A[10], Rudwaleit M[11]

[1]Radboud University Medical Centre, Nijmegen, The Netherlands; [2]Genomics England, London, UK; [3]Leiden University Medical Center, Leiden, The Netherlands; [4]University Health Network, Schroeder Arthritis Institute, University of Toronto, Toronto, Ontario, Canada; [5]University of California, San Francisco, California, USA; [6]UCB, Monheim am Rhein, Germany; [7]UCB, Braine-l'Alleud, Belgium; [8]UCB, Atlanta, Georgia, USA; [9]UCB, Slough, UK; [10]Oregon Health & Science University, Portland, Oregon, USA; [11]Klinikum Bielefeld, University of Bielefeld, Bielefeld, Germany

Introduction: Bimekizumab (BKZ) is a monoclonal IgG1 antibody that selectively inhibits interleukin (IL)-17F in addition to IL-17A. IL-17 has been implicated in the pathogenesis of acute anterior uveitis ('uveitis'). We report long-term incidence of uveitis following BKZ treatment in patients (pts) with axial spondyloarthritis (axSpA) or psoriatic arthritis (PsA).

Methods: Safety data are reported for two pools, each comprising three phase 2b/3 studies (BE AGILE, BE MOBILE 1 and BE MOBILE 2; BE ACTIVE, BE OPTIMAL and BE COMPLETE) and their open-label extensions (BE AGILE 2 and BE MOVING; BE ACTIVE 2 and BE VITAL), in pts with active axSpA (non-radiographic and radiographic axSpA) and active PsA, respectively. Uveitis events were identified using the preferred terms "autoimmune uveitis", "iridocyclitis", "iritis" and "uveitis", coded according to MedDRA v19.0; note that "acute anterior uveitis" was not a specific preferred term available in MedDRA v19.0. Uveitis rates and exposure-adjusted incidence rates (EAIR) per 100 pt-years (PY) for pts who received ≥1 BKZ 160 mg dose are reported (data cut-off: July 2023).

Results: Pts with axSpA (N = 848) had a mean age (standard deviation [SD]) of 40.3 (11.9) years and pts with PsA (N = 1,409) had a mean age (SD) of 49.3 (12.4) years, with a mean time since diagnosis (SD) of 6.1 (7.8) and 7.0 (8.0) years, respectively. Of pts with axSpA, 130 (15.3%) had a history of uveitis; 21 (1.5%) pts with PsA had a history of uveitis. The majority of pts with axSpA were human leukocyte antigen (HLA)-B27 positive (717/848 [84.6%]). In pts with axSpA across the pooled phase 2b/3 axSpA trial data, BKZ exposure was 2,514 PY. Uveitis occurred in 31/848 (3.7%; EAIR [95% confidence interval; CI]: 1.3/100 PY [0.9, 1.8]) pts overall and in 18/130 (13.8%; 4.8/100 PY [2.8, 7.6]) pts with history of uveitis. In pts without a history of uveitis, 13/718 (1.8%; 0.6/100 PY [0.3, 1.1]) pts had uveitis events. All events were mild/moderate, one led to treatment discontinuation. Incidence of uveitis in pts with PsA was low across the pooled phase 2b/3 PsA trial data (total BKZ exposure: 3,656 PY); uveitis occurred in three (0.2%; 0.1/100 PY [0.0, 0.2]) pts overall; one had a history of uveitis. No uveitis events led to treatment discontinuation.

Conclusion: Across 2,514 PY in pts with axSpA and 3,656 PY in pts with PsA, the long-term incidence of uveitis in BKZ-treated pts remained low.

Funding: UCB.

Previously presented: ACR 2024.

IP 11

Bimekizumab demonstrated sustained efficacy and safety across the full spectrum of axial spondyloarthritis: 3-year results from two phase 3 studies and their open-label extension

Baraliakos X[1], Deodhar A[2], van der Heijde D[3], Van den Bosch F[4], Magrey M[5], Maksymowych WP[6], Tomita T[7], Xu H[8], Voiniciuc D[9], Prajapati C[9], Manente M[10], Marten A[11], Gensler LS[12]

[1]Rheumazentrum Ruhrgebiet Herne, Ruhr-University Bochum, Bochum, Germany; [2]Oregon Health & Science University, Division of Arthritis and Rheumatic Diseases, Portland, Oregon, USA; [3]Leiden University Medical Center, Leiden, The Netherlands; [4]Ghent University and VIB Center for Inflammation Research, Belgium; [5]Case Western Reserve University, University Hospitals, Cleveland, Ohio, USA; [6]University of Alberta, Alberta, Canada; [7]Graduate School of Health Science, Morinomiya University of Medical Science, Osaka, Japan; [8]Shanghai Changzheng Hospital, Second Military Medical University, Shanghai, People's Republic of China; [9]UCB, Slough, UK; [10]UCB, Brussels, Belgium; [11]UCB, Monheim am Rhein, Germany; [12]University of California, Division of Rheumatology, San Francisco, California, USA

Introduction: Bimekizumab (BKZ) has shown efficacy to 2 years (yrs) in BE MOBILE 1/2 (non-radiographic [nr-]/radiographic [r-]axial spondyloarthritis[axSpA]) and their open-label extension (OLE). We assess BKZ 3-yr efficacy and safety across axSpA.

Methods: Patients (pts) in BE MOBILE 1/2 received BKZ (160mg;every 4weeks[wks;Q4W]) from Wk16; Wk52-completers could enter OLE (BE MOVING). Efficacy outcomes reported for BE MOBILE 1/2 and OLE to 3 yrs (164wks[112wk OLE];N = 586), assessed using mNRI/MI/OC. MRI inflammation assessed in MRI sub-studies and evaluated at baseline/Wks52/104/164, using SPARCC SIJ (nr-axSpA) and Berlin spine (r-axSpA) scores. Pooled safety data reported to 3 yrs (≥1BKZ dose; N = 574).

Results: 494/586 (84.3%) pts entered OLE. 425/494 (86.0%) completed Wk164 (nr-axSpA:175/254;r-axSpA:250/332). Efficacy sustained from 2-3 yrs across nr-/r-axSpA. ASAS40 responses maintained Wk104-164 (mNRI;nr-axSpA:59.4%-60.4%;r-axSpA:60.7%-60.1%). ASDAS low disease activity (LDA;<2.1) achieved by 61.8%/59.9% (nr-/r-axSpA). ASDAS inactive disease (ID;<1.3) and ASAS partial remission achieved at Wk104/164 by ~1/3 pts (ASDAS<1.3[MI]:nr-axSpA:31.4%/28.6%;r-axSpA:31.5%/31.0%;ASAS partial remission[mNRI]:nr-axSpA:34.7%/32.4%;r-axSpA:34.6%/36.5%). Sustained MRI inflammation suppression observed Wk104-164 (CfB;SPARCC SIJ:-7.4, -7.5[nr-axSpA],Berlin spine:-2.6, -2.8[r-axSpA]). At Wk164, >59% achieved MRI remission. To Wk164, 90.4% (519/574) had ≥1 TEAE. Most frequent TEAEs (EAIR/100PY;MedDRA v19.0): SARS-CoV-2 (COVID-19;14.5), nasopharyngitis (9.9), upper respiratory tract infection (5.8). Serious TEAEs remained low (4.9/100PY). 42 pts had TEAEs leading to discontinuation (7.3%;2.5/100PY). No deaths/major adverse cardiovascular events. 74 pts had hepatic events (12.9%;4.9/100PY); all non-serious, majority transient liver function test elevations/abnormalities; none caused discontinuation. Low EAIR/100PY for malignancies (0.5), serious infections (1.2) and SIB (0.1). Of 131 (22.8%;9.4/100PY) pts with fungal infections, 80 had Candida (13.9%;5.3/100PY). Most were mucocutaneous and mild/moderate, none serious/systemic; 6 led to discontinuation. 66 pts had oral candidiasis (11.5%;4.3/100PY). Low incidence of uveitis (1.5/100PY) and IBD (0.5/100PY). From Wk104-164, no new safety signals observed; most EAIRs of TEAEs were similar.

Conclusion: BKZ demonstrated sustained clinical response and was well tolerated through 3 yrs across axSpA.

Funding: UCB.

Previously submitted: EULAR 2025.

IP 12

Design of FIBRONEER-SARD Trial of Nerandomilast in Patients with Systemic Autoimmune Rheumatic Disease-Related Interstitial Lung Diseases (SARD-ILDs)- previously submitted to EULAR

Assassi S[1], Aggarwal R[2], Bonella F[3], Hoffmann-Vold AM[4,5], Kuwana M[7], Mihai C[5,6], Prosch H[8], Renzoni E[9], Sparks JA[10], Tomassetti S[11], Volkmann ER[12], Yi L[13], Zoz D[13], Sambevski S[14], Distler O[5]

[1]Division of Rheumatology, UTHealth Houston, Houston, TX, USA; [2]Division of Rheumatology and Clinical Immunology, University of Pittsburgh, Pittsburgh, PA, USA; [3]Center for Interstitial and Rare Lung Disease Unit, University of Duisburg-Essen, Ruhrlandklinik, Essen, Germany; [4]Department of Rheumatology, Oslo University Hospital, Oslo, Norway; [5]Department of Rheumatology, University Hospital Zurich, University of Zurich, Zurich, Switzerland; [6]Presenting on behalf of the authors; [7]Department of Allergy and Rheumatology, Nippon Medical School, Tokyo, Japan; [8]Department of Biomedical Imaging and Image-Guided Therapy, Medical University of Vienna, Vienna, Austria; [9]Royal Brompton Hospital and Imperial College London, London, UK; [10]Brigham and Women's Hospital and Harvard Medical School, Boston, MA, USA; [11]Department of Experimental and Clinical Medicine, Careggi University Hospital, Florence, Italy; [12]Division of Rheumatology, University of California, Los Angeles, CA, USA; [13]Boehringer Ingelheim Pharmaceuticals, Ridgefield, CT, USA; [14]Boehringer Ingelheim International GmbH, Ingelheim am Rhein, Germany

Nerandomilast is a preferential inhibitor of phosphodiesterase 4B with antifibrotic and immunomodulatory effects. It is being evaluated in Phase III trials in patients with IPF (FIBRONEER-IPF) and other forms of progressive pulmonary fibrosis (PPF) (FIBRONEER-ILD) where patients with SARD-ILDs were eligible to participate but the use of some immunosuppressant therapies was not permitted.

FIBRONEER-SARD will be an international, prospective, placebo-controlled, double-blind, Phase IIIb trial. Patients will have rheumatoid arthritis (RA), systemic sclerosis (SSc) (anticentromere auto-antibody negative), idiopathic inflammatory myopathies (IIMs), Sjögren's disease, or mixed connective tissue disease (MCTD), and fibrotic ILD of >10% extent on high-resolution computed tomography. Patients must have had no improvement in lung function or clinically significant ILD improvement despite treatment with immunosuppressive therapy for ≥6 Mos (≥3 Mos for IIMs). Use of cyclophosphamide in the 6 Mos will not be permitted. Patients will be randomised 1:1 to receive nerandomilast or placebo for 26 weeks.

The primary endpoint is the absolute change from baseline in quantitative ILD (QILD) score (%) at week 26. Secondary endpoints are absolute changes from baseline in quantitative lung fibrosis score (%), quantitative ground glass opacity score (%), forced vital capacity (FVC) (mL) and Living with Pulmonary Fibrosis (L-PF) questionnaire dyspnoea and cough domain scores at week 26, and infection-related adverse events over 26 weeks. Further endpoints are time to first use of antifibrotic or immunosuppressive rescue therapy, time to first non-elective hospitalisation for respiratory cause or death, a composite endpoint of time to first absolute decline in FVC % predicted >5%, acute exacerbation of ILD, non-elective hospitalisation for respiratory cause, or death, absolute changes in 28-joint disease activity score with C-reactive protein (DAS28-CRP), International Myositis Assessment and Clinical Studies Group (IMACS) Total Improvement Score, EULAR Sjögren's Syndrome Disease Activity Index (ESSDAI); modified Rodnan Skin Score (mRSS) and proportion of patients with improvement in the revised Combined Response index in SSc (CRISS)at week 26.

The FIBRONEER-SARD trial will provide additional insights into the efficacy and safety of nerandomilast in patients with SARD-ILDs taking a broad range of immunosuppressants, and explore the effects of nerandomilast on the underlying SARD.

IP 13

FIBRONEER™-ILD: a phase III randomized placebo-controlled trial of the preferential PDE4B inhibitor nerandomilast in patients with progressive pulmonary fibrosis - previously submitted to APAPP

Maher TM[1], Assassi S[2], Azuma A[3], Bruni C[4,5], Cottin V[6], Hoffmann-Vold AM[7], Kreuter M[8], Oldham JM[9], Richeldi L[10], Valenzuela C[11], Wijsenbeek MS[12], Clerisme-Beaty E[13], Coeck C[14], Gu H[15], Ritter I[13], Stowasser S[13], Voss F[16], Weimann G[13], Zoz DF[15], Martinez FJ[17]

[1]Keck Medicine of USC, Los Angeles, CA, USA; [2]Division of Rheumatology, McGovern Medical School, University of Texas, Houston, TX, USA; [3]Pulmonary Medicine and Clinical Research Center, Mihara General Hospital, Saitama, Japan; [4]Department of Rheumatology, University Hospital Zurich, University of Zurich, Zurich, Switzerland; [5]Presenting on behalf of the authors; [6]Hôpital Louis Pradel, Centre Coordonnateur National de référence des Maladies Pulmonaires Rares, Hospices Civils de Lyon, Université Claude Bernard Lyon 1, Lyon, France; [7]Department of Rheumatology, Oslo University Hospital, Oslo, Norway; [8]Mainz Center for Pulmonary Medicine, Departments of Pneumology, Mainz University Medical Center and of Pulmonary, Critical Care & Sleep Medicine, Marienhaus Clinic Mainz, Mainz, Germany; [9]Pulmonary and Critical Care Medicine, University of Michigan, Ann Arbor, MI, USA; [10]Unità Operativa Complessa di Pneumologia, Fondazione Policlinico Universitario A. Gemelli IRCCS, Università Cattolica del Sacro Cuore, Rome, Italy; [11]ILD Unit, Pulmonology Department, Hospital Universitario de la Princesa, Universidad Autonoma de Madrid, Madrid, Spain; [12]Center for Interstitial Lung Diseases and Sarcoidosis, Department of Respiratory Medicine, Erasmus University Medical Center, Rotterdam, The Netherlands; [13]Boehringer Ingelheim International GmbH, Ingelheim am Rhein, Germany; [14]Boehringer Ingelheim SComm, Brussels, Belgium; [15]Boehringer Ingelheim Pharmaceuticals, Inc., Ridgefield, CT, USA; [16]Boehringer Ingelheim Pharma GmbH & Co. KG, Ingelheim am Rhein, Germany; [17]Department of Medicine, Cornell University, New York City, NY, USA

Background/Aim: Nerandomilast is a preferential inhibitor of phosphodiesterase 4B (PDE4B) with antifibrotic and immunomodulatory properties. The Phase III FIBRONEER™-ILD trial (NCT05321082) investigated the efficacy and safety of nerandomilast in patients with progressive pulmonary fibrosis (PPF).

Methodology: FIBRONEER™-ILD was a randomized, double-blind, placebo-controlled trial. PPF was defined using the same criteria as in the INBUILD trial [Flaherty KR et al. N Engl J Med 2019;381:1718-27). Patients were randomized 1:1:1 to receive 9 mg or 18 mg of nerandomilast or placebo twice daily. The primary endpoint was the change from baseline in FVC (mL) at week 52.

Results: Among 1176 treated patients, baseline mean (SD) age was 66 (10) years; 56% were male; 58% were White and 38% were Asian. Mean (SD) FVC was 70 (16) % predicted and diffusing capacity of the lung for carbon monoxide was 49 (17) % predicted; 44% took background nintedanib. The most frequent ILD diagnoses were autoimmune ILDs (28%), hypersensitivity pneumonitis (20%), unclassifiable idiopathic interstitial pneumonia (20%) and idiopathic non-specific interstitial pneumonia (19%). The primary endpoint of change from baseline in FVC (mL) at week 52 was met; the full results will be available shortly.

Conclusions: In a Phase III trial in patients with PPF, nerandomilast slowed disease progression over 52 weeks.

Disclosures: This trial was supported by Boehringer Ingelheim International GmbH.

IP 14

Knowledge and perception of tick exposure and Lyme borreliosis in the general population in Switzerland

Covi M[1], Russmann R[2], Gould LH[3], Colby E[4], Stark JH[5], Nuttens C[6]

[1]Vaccines & Antivirals Medical Affairs, Pfizer AG, Zurich, ZH, Switzerland; [2]Access and Value, Pfizer AG, Zurich, ZH, Switzerland; [3]Global Vaccines Medical Affairs, Pfizer Research & Development, Pfizer Inc., New York, NY, USA; [4]Global Real-World Evidence, Pfizer Inc., New York, NY, USA; [5]Global Vaccines Medical Affairs, Pfizer Research & Development, Pfizer Inc., Cambridge, MA, USA; [6]Global Vaccines Medical Affairs, Pfizer Research & Development, Pfizer SAS, Paris, France

Introduction: Lyme borreliosis (LB), a bacterial infection caused by various genospecies of Borrelia burgdorferi sensu lato complex, is transmitted to humans through the bite of infected Ixodes spp ticks and is the most common tick-borne disease in Europe1,2. LB commonly presents as erythema migrans and, in its disseminated forms, can present as Lyme neuroborreliosis, arthritis, or carditis3. In Switzerland, data about the general population's knowledge and risk perception towards LB are limited. In 2022, we surveyed adults in 20 European countries to investigate awareness about ticks and LB as well as level of concern about contracting LB4. This abstract presents the results of the survey for respondents in Switzerland.

Methods: We used an existing survey panel to conduct an online survey of adults aged 18-65 years old, with recruitment quotas on age, gender, and region. The survey included questions about LB knowledge, perception of tick exposure, and outdoor activities. We conducted descriptive analyses with weighting to adjust for the complex survey design.

Results: Of 1'403 respondents, 98 % were aware of ticks and 70 % were aware of LB. Among respondents that were aware of ticks and LB, 79 % considered LB a severe disease, 33 % were concerned about contracting LB, and 27 % perceived themselves at risk of contracting LB. Overall, 51 % of respondents reported a tick bite at least once in their lifetime. Always or often conducting tick checks was reported by 47 % of respondents. Respondents reported spending an average of 19 hours outdoors each week from April to November.

Discussion: In Switzerland, there is broad awareness of ticks and LB in the general population. However, at 70%, awareness of LB in Switzerland was the lowest among the 20 European countries in which the survey was conducted4. Although the Swiss population spends a considerable amount of time outdoors, even respondents who are aware of ticks and LB do not regularly use effective preventive measures. Of the preventive measures surveyed, checking for ticks and using protective clothing were more frequently reported than avoiding tick-infested areas or using insecticides. Contracting LB thus remains a public health concern for Switzerland.

References

1. Medlock JM. et al. Parasit Vectors 2013:6:1.
2. Nau R. et al. Dtsch Arztebl Int 2009:106(5):72.
3. Angulo FJ. et al. Int J Infect Dis 2024:149:107242.
4. Gould LH. et al. Epidemiol Infect 2025:153:e29.

IP 15

Identifying differential predictive biomarkers for anti-interleukin-6 receptor and anti-tumor necrosis factor-α in active rheumatoid arthritis: MONARCH biomarker analyses

Agueusop I[1], Margerie D[2], Remaury A[3], Brard R[1], Frau F[2], Gerard E[4], Thill G[3], Yaligara V[3], Didier M[3], Kohlmann M[5], Herrmann M[6], Biesemann N[6]

[1]Sanofi R&D, Biostatistics, Industriepark Hoechst, 65926 Frankfurt am Main, Germany; [2]Sanofi R&D, Digital and Data Science, Industriepark Hoechst, 65926 Frankfurt am Main, Germany; [3]Sanofi R&D, Translational Sciences, 91385 Chilly-Mazarin, France; [4]Sanofi, Randomised Clinical Trials and Post Hoc Analyses Team, 82 Avenue de Raspail, 94250 Gentilly, France; [5]Sanofi R&D, Early Clinical Development Therapeutic Area Immunology and Inflammation, Industriepark Hoechst, 65926 Frankfurt am Main, Germany; [6]Sanofi R&D, Immunology and Inflammation Therapeutic Area, Type 1/17 Immunology Cluster, Industriepark Hoechst, 65926 Frankfurt am Main, Germany

Introduction: Identification of predictive and pharmacodynamic (PD) biomarkers to treatment response is crucial to improve clinical and economic outcomes in active rheumatoid arthritis (RA) patients. Here, we identified blood-based predictive and PD biomarkers at different time points in active RA patients treated with sarilumab (anti-interleukin-6 receptor [anti-IL-6R]) or adalimumab (anti-tumour necrosis factor-α [anti-TNF-α]).

Methods: Blood samples from the MONARCH trial (NCT02332590) that evaluated safety and efficacy of anti-IL-6R vs anti-TNF-α monotherapies in RA were used in this study.1 Predictive biomarkers to anti-IL-6R and anti-TNF-α treatments at baseline (pre-treatment), and post-treatment Week (W) 2 and PD biomarkers at post-treatment W2 and W24 were identified in serum (n = 804 samples from 268 patients) using inflammation and cardiovascular-III multiplexed panels (Olink Proteomics). Random Forest regression was performed to identify relative importance of biomarkers in predicting treatment response, while PD biomarkers were identified by linear model (analysis of covariance). Gene expression changes in peripheral blood (n = 522 samples from 261 patients) and pathways deregulated by each treatment were assessed at W2 using RNA sequencing.

Results: We focused on relative prediction as absolute prediction performance of biomarkers to predict treatment response was limited. Despite this limitation, serum biomarkers most predictive to anti-IL-6R response were different from those of anti-TNF-α at different timepoints. Biomarkers predicting anti-IL-6R treatment response were correlated with innate immune activation and synovial inflammation; biomarkers for anti-TNF-α response were mainly T-cell and neutrophil-related. Further, PD biomarkers for anti-IL-6R and anti-TNF-α were different. RNA sequencing confirmed that deregulated genes and pathways were different for both treatments.

Conclusion: The unbiased analysis of serum proteins in this study demonstrated a trend in difference in blood-based predictive biomarkers for anti-IL-6R and anti-TNF-α treatment response at different timepoints. PD biomarkers differed significantly between two treatments. However, further studies with larger sample size are needed to confirm the findings. This study supports the concept of existence of distinct endotypes for different RA therapies.

Original presentation at DGRh 2024.

Reference:

1. Burmester GR, et al. Ann Rheum Dis 2017:840-7.

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