ACR 2026 Preview – Clinical and AI / ML



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New Trends in Rheumatology Strategy at ACR 2026 (1/3)

- **Cellular therapy will move from refractory case series toward a defined place in rheumatology**
  - ACR 2026 will devote a scientific session to CAR-T cell therapy in 2026 and a second to preparing paediatric rheumatology for CAR-based therapies. Late-breaking content will include durable responses at twelve months or more in refractory lupus, a Phase 2 mesenchymal stromal cell trial and an aggregate safety profile for a CD19-directed autologous product. The question will shift from whether cell therapy works in autoimmunity to what it takes to deliver, covering programme readiness, ethics and access
- **B-cell and plasma-cell depletion will deepen and spread across indications**
  - ACR 2026 will report histologic remission and deep kidney B-cell depletion with obinutuzumab in lupus nephritis, alongside content on BAFF/APRIL-directed agents, CD40L blockade and T-cell engagers. Coverage will extend to an anti-BAFF-R antibody in Sjögren's disease and to CD19-directed engagers. Depth and durability of depletion are becoming the competitive axis, rather than the target itself

New Trends in Rheumatology Strategy at ACR 2026 (2/3)

- **Sjögren's disease will emerge as the field's most contested development area**
  - Sjögren's disease will run through the programme more heavily than any other indication, from optimal care in a new era to the industry agenda. Scheduled data will include long-term results from an anti-BAFF-R extension study, a CD40L-directed readout on systemic disease activity and a combination trial in a disease with no approved therapy. A diagnostic and endpoint framework is forming at the same time as the assets, which will shape who can run registrational trials

- **Metabolic medicine will enter rheumatology through obesity and incretin biology**
  - ACR 2026 will report 68-week Phase 3 results for a once-weekly incretin in knee osteoarthritis pain and obesity, with a dose-ranging analysis and weight loss linked to patient-reported outcomes in rheumatoid arthritis. Mechanisms and the medication landscape will be set out alongside obesity in psoriatic arthritis and knee osteoarthritis. Weight is being reframed as a modifiable disease driver rather than a comorbidity

New Trends in Rheumatology Strategy at ACR 2026 (3/3)

- **Head-to-head trials and oral targeted therapies will reset competitive positioning**
  - ACR 2026 will report 24-week head-to-head results for bimekizumab versus risankizumab in active psoriatic arthritis, with a Phase 3 head-to-head of girocitinib versus tofacitinib in refractory rheumatoid arthritis. A head-to-head superiority trial in psoriatic arthritis and 48-week switching data after TNF inhibitor failure will add to it. Superiority, not non-inferiority, is becoming the entry price for differentiation in crowded classes
- **Rare immune-mediated diseases will acquire their first approved and late-stage options**
  - The programme will give sustained attention to the first FDA-approved treatment for IgG4-related disease, alongside a Phase 3 open-label extension in the same disease. Myositis will gain a Phase 3 FcRn antagonist readout, and fibromyalgia its first approval in over fifteen years. Rare rheumatology is becoming commercially viable, drawing entrants into small, previously untreated populations

Key Sessions To Watch

Date	Session Title (short)	Type	Author / Institution	Why Watch
08 Nov 2026	Retatrutide Once Weekly for the Treatment of Knee Osteoarthritis Pain and Obesity	Plenary	Philip Conaghan, University of Leeds	68-week Phase 3 results for a once-weekly incretin in knee osteoarthritis, selective T-cell depletion in rheumatoid arthritis and an evaluation of AI guideline concordance
08 Nov 2026	CAR-T Cell Therapy in 2026	Scientific Session	Anca Askanase, Hospital for Special Surgery	Where cell therapy stands in lupus, scleroderma and other rheumatic autoimmune diseases, and what delivering it requires
08 Nov 2026	GLP-1 Receptor Agonists: Perspectives on Use in Autoimmune Inflammatory Rheumatic Diseases	Scientific Session	Veena Ranganath, UCLA	Mechanisms and the medication landscape applied directly to inflammatory rheumatic disease
09 Nov 2026	Plenary II (1820-1825): B-Cell Depletion, Risk & Imaging	Plenary	Richard Furie, Northwell	Histologic remission and deep kidney B-cell depletion in lupus nephritis, plus proteomic trajectories in preclinical lupus
10 Nov 2026	Plenary III (2803-2808): Head-to-Head, Biosimilars & Prediction	Plenary	Joseph Merola, UT Southwestern Medical Center	24-week head-to-head results for bimekizumab versus risankizumab in active psoriatic arthritis
10 Nov 2026	Decoding Autoimmunity with AI and Machine Learning	Scientific Session	Soumya Raychaudhuri, Brigham and Women's Hospital	Spatial molecular data in inflamed tissue and interpretable machine learning for immune mechanism discovery
10 Nov 2026	Late-Breaking Posters: Cell Therapy, IgG4-RD & Sjögren's	Poster Session	John Stone, Massachusetts General Hospital	Eighteen posters spanning cell therapy in refractory lupus, IgG4-related disease, Sjögren's disease and an oral IL-23 receptor peptide
11 Nov 2026	Late-Breaking Abstracts: Myositis, Lupus & Gout	Abstract Session	Rohit Aggarwal, University of Pittsburgh	Six abstracts covering myositis, lupus, Sjögren's disease, gout and a head-to-head trial in rheumatoid arthritis

Industry-Supported Sessions & Focus Areas – ACR 2026



ACR 2026– Competitive Landscape at a Glance (1/2)

Name	Sessions	Companies / Assets	Why It Matters
Cellular therapy in autoimmunity	Multiple	Bristol Myers Squibb / zola-cel; Cabaletta Bio / rese-cel (resecabtagene autoleucel); mesenchymal stromal cells in refractory lupus; allogeneic and paediatric CAR programmes	Two dedicated sessions and multiple refractory-disease readouts will move the discussion from proof of concept to programme readiness, ethics and who can actually deliver these therapies
B-cell and plasma-cell directed therapy	Multiple	Obinutuzumab in lupus nephritis; Novartis / ianalumab; telitacicept and povetacicept; CDR-Life / CDR209 TRBV9×CD3 engager; teclistamab and CD19-directed engagers	Depth and durability of depletion are replacing target selection as the point of differentiation, with engagers competing directly against manufactured cell therapy
Sjögren's disease	Multiple	Novartis / ianalumab (NEPTUNUS); Amgen / dazodalibep; Vor Bio upstream programmes; Johnson & Johnson pathogenesis programme; hydroxychloroquine combination strategies	The most contested area of the meeting, with endpoints and assessment tools forming alongside the assets in a disease that still has no approved systemic therapy
Lupus and lupus nephritis	Multiple	GSK and Biogen early-intervention programmes; Genentech lupus nephritis events; AstraZeneca translational and real-world SLE programme; Bristol Myers Squibb / afimetoran and TYK2 inhibitors	Competition is shifting toward earlier intervention and treat-to-target management rather than refractory rescue, which widens the eligible population considerably

ACR 2026– Competitive Landscape at a Glance (2/2)

Name	Sessions	Companies / Assets	Why It Matters
Psoriatic arthritis and axial disease	Multiple	UCB / bimekizumab and BE BOLD; Johnson & Johnson axial involvement and icotrokinra; Bristol Myers Squibb oral option; AbbVie switching data; Lilly integrated obesity management	Head-to-head superiority is now the entry price for differentiation, with oral agents and whole-body framing used to separate otherwise comparable biologics
IgG4-related disease and myositis	Multiple	Amgen / UPLIZNA; Zenas Biopharma; obexelimab (INDIGO extension); argenx / efgartigimod PH20 SC (ALKIVIA); Octapharma immunoglobulin therapy	A first approval has made a rare disease commercially viable, and several late-stage entrants are positioning against it before the market is established
Interstitial lung disease and systemic sclerosis	Multiple	Boehringer Ingelheim / progressive pulmonary fibrosis and autoimmune ILD events; AstraZeneca systemic sclerosis programme; Genentech; cell therapy in scleroderma	Screening and earlier detection are the commercial lever, since the treatment options are established but the diagnosed population remains small
Metabolic and structural disease	Multiple	Retatrutide in knee osteoarthritis; Lilly immunometabolic obesity programmes; pozdeutinurad (AR882) in gout; osiramestrocel with cartilage acellular matrix; Tonix Medicines in fibromyalgia	Osteoarthritis, gout and fibromyalgia are reopening as drug markets after long periods with little innovation, drawing in metabolic and regenerative approaches

Key Industry-Sponsored Sessions at ACR 2026 (1/5)

- **Johnson & Johnson:**
  - Focus Areas: Psoriatic Arthritis With Axial Involvement & Sjögren's Disease
  - Johnson & Johnson's programme is set to examine the management of active psoriatic arthritis across multiple key domains with a focus on axial involvement, and to cover the pathogenesis of Sjögren's disease with clinical pearls on diagnosis. Discussion is expected to centre on recognising domains that are under-treated in routine practice
- **AstraZeneca:**
  - Focus Areas: Systemic Sclerosis & Translational Evidence in SLE
  - AstraZeneca's programme is set to connect clinical insights, biology and future research in systemic sclerosis, and to link translational science, clinical trials and real-world data in systemic lupus erythematosus. The emphasis is likely to be on integrating evidence from diverse sources to guide treatment decisions across two clinically heterogeneous diseases

Key Industry-Sponsored Sessions at ACR 2026 (2/5)

- **Lilly:**
  - Focus Areas: New Data in Rheumatology & the Immunometabolic Burden of Obesity
  - Lilly's programme is set to present new data intended to start a new conversation, and to examine the immunometabolic burden of obesity in knee osteoarthritis and a whole-body approach to psoriatic arthritis care through integrated obesity management. Discussion is expected to position weight as a treatable disease driver
- **UCB:**
  - Focus Areas: Head-to-Head Superiority in PsA & Shared Immune Pathways
  - UCB's programme is set to present a head-to-head superiority trial in psoriatic arthritis and to connect axial spondyloarthritis and hidradenitis suppurativa through shared immune pathways, with a further event on disease control across the lupus reproductive journey. The focus will be on evidence that separates agents within a class

Key Industry-Sponsored Sessions at ACR 2026 (3/5)

- **Amgen:**
  - Focus Areas: IgG4-Related Disease & Targeted Therapy Integration
  - Amgen's programme is set to cover the first FDA-approved treatment for IgG4-related disease and the integration of targeted therapy to improve outcomes in the same disease. Discussion is expected to address diagnosis and referral in a condition that has only recently acquired an approved option
- **Bristol Myers Squibb:**
  - Focus Areas: Oral Therapy in PsA & TYK2 Inhibition in Lupus
  - Bristol Myers Squibb's programme is set to present the efficacy, safety and dosing of a new oral treatment option for active psoriatic arthritis, and to reframe lupus care around emerging TYK2 inhibitors and treat-to-target management. Session is expected to weigh oral convenience against established biologic benchmarks

Key Industry-Sponsored Sessions at ACR 2026 (4/5)

- **GSK:**
  - Focus Areas: Early Intervention & Long-Standing Perceptions in Lupus
  - GSK's programme is set to ask whether clinicians are intervening early enough to prevent progression in lupus, and to revisit long-standing perceptions in lupus and lupus nephritis with emerging evidence. Discussion is expected to argue for treating before organ damage accrues
- **Boehringer Ingelheim:**
  - Focus Areas: Progressive Pulmonary Fibrosis & Autoimmune ILD
  - Boehringer Ingelheim's programme is set to address the treatment of progressive pulmonary fibrosis in rheumatology patients and the diagnosis and treatment of autoimmune interstitial lung disease. The focus will be on detection, since the treatable population is defined by who gets screened

Key Industry-Sponsored Sessions at ACR 2026 (5/5)

- **argenx:**
  - Focus Areas: Autoimmune Myositis Burden, Biology & Targeted Strategies
  - argenx's programme is set to reframe autoimmune myositis with new perspectives on burden, biology and clinical outcomes, and to integrate targeted strategies to advance patient outcomes in myositis care. Discussion is expected to accompany a Phase 3 readout scheduled in the late-breaking programme
- **Genentech:**
  - Focus Areas: Treatment Opportunities in Lupus Nephritis
  - Genentech's programme is set to provide an expert-led review identifying treatment opportunities for patients with lupus nephritis, and to examine new treatments intended to improve patient outcomes in the same disease. Remission depth and long-term preservation of kidney function are likely to be key areas of focus

Emerging Assets & Development Areas

Asset / Company	2026 Presence
Zola-cel (Bristol Myers Squibb)	Durable responses at twelve months or more in severe refractory systemic lupus erythematosus, with safety, efficacy and translational data
Rese-cel (Cabaletta Bio)	Resecabtagene autoleucel in the RESET clinical programme, with an aggregate safety profile and one-year immunomodulatory-free responses
Ianalumab (Novartis)	Long-term results from the NEPTUNUS extension study in Sjögren's disease, with dual mechanism of action data
Dazodalibep (Amgen)	A late-breaking readout on systemic disease activity in Sjögren's disease, from an Fc-free CD40L-targeting scaffold
Afimetoran (Bristol Myers Squibb)	A Phase 2 randomised, double-blind, placebo-controlled study of an oral dual TLR7/8 antagonist
Efgartigimod PH20 SC (argenx)	Phase 3 ALKIVIA results in adults with idiopathic inflammatory myopathy
CDR209 (CDR-Life)	A TRBV9×CD3 T-cell engager for precision depletion of disease-associated T cells in axial spondyloarthritis
IMP761 (Immutep)	First clinical data for an immunosuppressive LAG-3 agonist antibody

AI/ML Trends & Strategic Watchpoints at ACR 2026



AI / Digital Health Angle at ACR 2026 (1/3)

- **AI will reach the main stage, and the first question asked will be about reliability**
  - ACR 2026 will present a comparative evaluation of guideline concordance and hallucination risk across AI platforms in rheumatology, placing model trustworthiness in front of the full congress. Sessions will include high-accuracy inference of physician global assessment in juvenile idiopathic arthritis using a frontier large language model. Benchmarking against clinical standards, rather than demonstration, will set the tone for how the field evaluates these tools
- **Machine learning will be positioned as a discovery instrument, not only a clinical tool**
  - The programme will cover spatial molecular data in inflamed tissue and interpretable machine learning for immune mechanism discovery, alongside next-generation clinical trials built on AI and real-world evidence. Content will span deep phenotyping, proteomic trajectories and multiomic approaches to disease heterogeneity. The value proposition is target and endpoint discovery, which places AI upstream of the therapies rather than beside them
- **Implementation and global access will be addressed as explicitly as performance**
  - ACR 2026 will give sustained attention to harnessing artificial intelligence to transform global rheumatology, covering applications in contemporary practice and personalisation of treatment. AI development in clinical care, including its pitfalls, and the use of large language models to accelerate research will also be addressed. Who can adopt these tools, and under what safeguards, is being treated as part of the scientific question

AI / Digital Health Angle at ACR 2026 (2/3)

- **Digital health, as distinct from AI, will focus on symptom burden and behaviour**
  - ACR 2026 will cover digital interventions for fatigue, pain, sleep and weight, including a patient co-designed fatigue intervention in spondyloarthritis, digital cognitive behavioural therapy for insomnia combined with therapeutic movement in osteoarthritis, and a technology-supported behavioural weight loss programme. Virtual reality for physical activity and patient empowerment will also feature. Digital content is aimed at symptoms that drugs do not resolve, which positions it as complementary rather than competitive
- **Key sessions include:**
  - Decoding Autoimmunity with AI and Machine Learning
  - Harnessing Artificial Intelligence to Transform Global Rheumatology
  - Reimagining Care: AI for Scalable Health and Research Systems
  - Reimagining Rheumatology Care with Artificial Intelligence and Virtual Reality
  - Supporting Chronic Wellness: Digital Health Interventions for Fatigue, Pain, Sleep and Weight
  - Artificial Intelligence in Rheumatology: guideline concordance and hallucination risk across platforms
  - Next Generation Clinical Trials with Artificial Intelligence and Real-World Evidence

AI / Digital Health Angle at ACR 2026 (3/3)

- High-accuracy inference of physician global assessment in juvenile idiopathic arthritis using a frontier large language model
- Leveraging large language models to accelerate research and care in rheumatology
- Interpretable machine learning using big data for immune mechanism discovery
- Challenges and opportunities in applying spatial molecular data to inflammatory tissues
- AI and ML to personalise treatment for rheumatic and musculoskeletal diseases
- Longitudinal risk stratification in pulmonary sarcoidosis using clinical and multiregional CT predictors

- **Sessions suggest AI and digital tools are increasingly being used to improve:**
  - Disease activity scoring and assessment where expert raters are scarce
  - Mechanism discovery from spatial, proteomic and multiomic tissue data
  - Patient selection and endpoint definition in clinical trial design
  - Risk stratification and prediction of treatment response
  - Imaging interpretation in sacroiliac joints, lung and musculoskeletal ultrasound
  - Self-management of fatigue, pain, sleep and weight between visits
  - Access to specialist-level assessment in under-served settings

What We're Watching for Post-ACR 2026

- Whether cellular therapy moves past refractory case series into defined programme pathways, and who can realistically deliver it
- Whether deeper B-cell depletion translates into histologic and durable remission rather than short-term response
- Whether Sjögren's disease converges on endpoints robust enough to support registrational trials
- Whether incretin therapy establishes weight as a treatable driver of osteoarthritis and inflammatory disease activity
- Whether head-to-head superiority data reshuffle positioning within the IL-17, IL-23 and JAK classes
- Whether IgG4-related disease supports more than one commercially viable entrant now that an approved option exists
- Whether AI tools clear the reliability bar set by the congress's own guideline-concordance evaluation
- Whether gout, osteoarthritis and fibromyalgia sustain renewed pipeline interest after their first approvals in years

Strategic Insights and Strategy Development is our focus

