Abstract Highlights

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The following highlights showcase some of the most impactful research presented at the European Alliance of Associations for Rheumatology (EULAR) 2026 Congress. Covering topics from precision medicine and novel therapeutic strategies to disease mechanisms, comorbidities, and patient-centred care, these studies reflect the latest advances shaping the future of rheumatology.

Autoimmune Rheumatic Disease Linked to Worse Post-COVID Outcomes

PATIENTS with pre-existing rheumatologic and dermatologic autoimmune diseases experienced significantly poorer outcomes following COVID-19 infection than those without autoimmune disease, according to research presented at EULAR 2026.[1]

Although the acute effects of COVID-19 are well characterised, less is known about long-term outcomes in patients with autoimmune disease. To address this, researchers analysed data from the TriNetX (TriNetX, LLC, Cambridge, Massachusetts, USA) Research Network to compare post-acute mortality, hospitalisation, and respiratory symptoms in adults with and without pre-existing autoimmune disease.

The retrospective study included more than 4.2 million adults diagnosed with COVID-19 between March 2020–January 2026. Of these, 177,311 had a rheumatologic or dermatologic autoimmune disease diagnosed at least 6 months before COVID-19 infection.

Between 30–180 days after infection, patients with autoimmune disease experienced almost double the risk of death compared with those without autoimmune disease (1.64% versus 0.84%; risk ratio: 1.96). Survival analysis also demonstrated a significantly higher risk of mortality over the 180-day follow-up period.

Hospital utilisation was similarly increased. More than 6% of patients with autoimmune disease required hospital admission following COVID-19, compared with 2.9% of those without autoimmune disease, representing more than a two-fold increase in risk.

Patients with autoimmune disease who were admitted also experienced a greater number of hospital encounters.

Persistent respiratory symptoms were also more common in the autoimmune cohort. Dyspnoea affected 10.97% of patients with autoimmune disease compared with 4.58% of those without, corresponding to a 2.4-fold increased risk.

The authors concluded that pre-existing rheumatologic and dermatologic autoimmune disease is associated with significantly increased mortality, hospital utilisation, and persistent respiratory symptoms following COVID-19. These findings highlight the need for enhanced post-COVID monitoring and targeted strategies to reduce long-term complications in patients living with autoimmune rheumatic disease.

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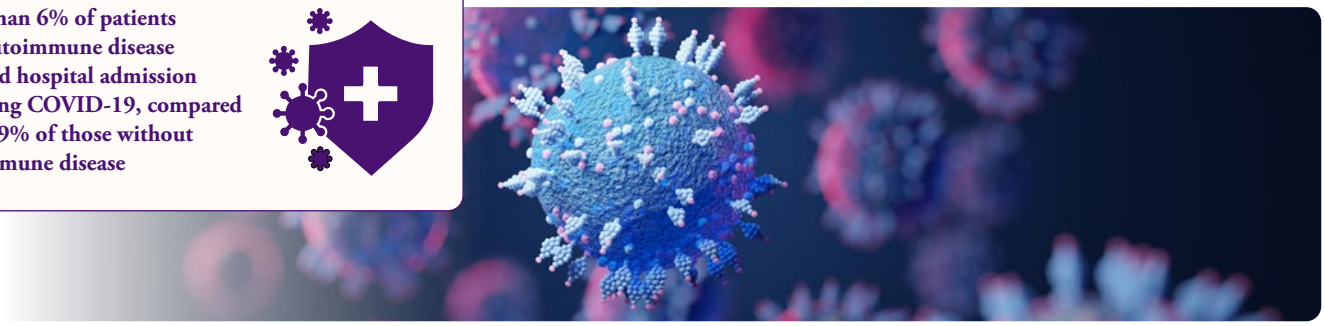

Lifetime Smoking Exposure Rising in Men with Rheumatoid Arthritis

WHILE current smoking rates among people with rheumatoid arthritis (RA) in Switzerland have declined over the past decade, lifetime smoking exposure has increased among men with the disease, according to research presented at EULAR 2026.[2]

Smoking is a well-established environmental risk factor for RA and contributes to cardiovascular and respiratory comorbidities. Although smoking prevalence has fallen in the Swiss general population, it has remained unclear whether patients with RA have experienced similar trends.

Researchers analysed data from the Swiss Clinical Quality Management registry, including 5,523 clinical visits from 3,983 patients with documented smoking status between 2012–2022. Smoking patterns were compared with national population data from the Swiss Federal Statistical Office, with additional analyses accounting for age, sex, and education.

Current smoking prevalence among patients with RA fell from 22.9% in 2012 to 18.1% in 2022, mirroring the decline observed in the general population. Throughout the study period, current smoking remained consistently less common among patients with RA than in the wider Swiss population.

However, important differences emerged when lifetime smoking exposure was examined. Among men with RA, the proportion who had ever smoked increased from 64.9% in 2012 to 68.8% in 2022, while lifetime smoking declined among Swiss men overall. After adjusting for age and education, the gap between men with RA and the general population widened significantly over the 10-year period.

Educational inequalities were also more pronounced in the RA cohort. Men with lower educational attainment had particularly high rates of lifetime smoking, while a similar, although less marked, gradient was observed among women with RA.

The authors suggest that although public health efforts have successfully reduced current smoking, men who go on to develop RA continue to have disproportionately high lifetime exposure to tobacco. These findings reinforce the role of smoking as a major risk factor for RA, and highlight the need for more targeted smoking prevention and cessation strategies, particularly among men and individuals with lower educational attainment.

> **Men with lower educational attainment had particularly high rates of lifetime smoking**

Rosnilimab Demonstrates Efficacy in RENOIR, a Phase IIb Trial

THE INVESTIGATIONAL monoclonal antibody rosnilimab demonstrated efficacy, safety, and tolerability in patients with seropositive rheumatoid arthritis (RA), with similar results regardless of previous experience with biologic/targeted synthetic disease-modifying antirheumatic drugs (b/tsDMARDs), in the Phase IIb trial RENOIR, presented at EULAR 2026.[3]

Multiple classes of b/tsDMARDs are often required in patients with RA as a result of inadequate or lost response. Previous studies have reported rosnilimab selectively targeting pathogenic T cells in blood and synovium, suggesting a potential advantage for use as a new treatment in patients with RA.

The aim was to report the efficacy, safety, and tolerability results from the multicentre, randomised, double-blind, placebo-controlled Phase IIb trial, RENOIR. Participants were monitored through an active treatment and an off-treatment follow-up period to assess durability of response.

The cohort included 424 participants with moderate-to-severe active seropositive RA on concurrent conventional synthetic DMARDs with less than three previous b/tsDMARDs treatment failures. Patients were randomised to receive one of three doses of rosnilimab or placebo. The primary endpoint was mean change in Disease Activity Score-28 for Rheumatoid Arthritis with C-Reactive Protein (DAS28-CRP) after 12 weeks.

All the rosnilimab doses met the primary endpoint, with rosnilimab demonstrating a statistically significant improvement in DAS28-CRP versus placebo at Week 12 ($p<0.01$). Rosnilimab also led to higher rates of response for a 50% and 70% clinical improvement in arthritis (American College of Rheumatology [ACR]50 and ACR70), greater achievement of Clinical Disease Activity Index (CDAI) Low Disease Activity (LDA), improvements in patient-reported outcomes, and significantly greater changes in ACR20 and mean change in high-sensitivity CRP. Importantly, comparable results were seen in all assessments of participants both with and without prior b/tsDMARD experience.

In total, 69% of patients treated with rosnilimab reached CDAI LDA at Week 14 and were eligible to continue treatment. Response rates increased through Week 28 for secondary endpoints and patient-reported outcomes, and were largely maintained during the off-drug follow-up period. Specifically, during the off-drug period, 80%, 82%, and 75% of participants (100 mg, 400 mg, and 600 mg groups, respectively) maintained CDAI LDA.

> **For both b/tsDMARD-experienced and -naïve participants, rosnilimab demonstrated efficacy, safety, and tolerability for seropositive RA**

Many rosnilimab-treated participants who were ineligible to continue had achieved meaningful efficacy by criteria other than CDAI LDA at Week 14 in post-treatment follow-up evaluations (60% achieved ACR20 and 18% achieved ACR50).

Rosnilimab was generally well tolerated with a limited number of discontinuations. There were minimal serious and opportunistic infections, with similar rates between rosnilimab and placebo arms. Finally, there were no reported deaths or malignancies.

These data show that for both b/tsDMARD-experienced and -naïve participants, rosnilimab demonstrated efficacy, safety, and tolerability for seropositive RA. Researchers expressed that rosnilimab may have important clinical implications for its role in the depletion of pathogenic T cells, and called for future studies to further explore the use of rosnilimab in RA.

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Serum Proteomics Identifies Candidate Biomarkers for Anti-TNF Response in Rheumatic Diseases

BASELINE serum protein profiling may help predict which patients with inflammatory rheumatic diseases will respond to anti-TNF therapy, according to research presented at EULAR 2026.[4]

Although anti-TNF therapies have transformed the management of conditions such as rheumatoid arthritis (RA) and axial spondyloarthritis (axSpA), treatment response varies considerably between individuals. Currently, there are no validated biomarkers capable of predicting which patients are most likely to benefit from these therapies.

To address this unmet need, researchers performed serum proteomic profiling in 86 individuals, including 25 patients with RA, 45 with axSpA, and 16 healthy controls. Baseline blood samples were collected before anti-TNF treatment, and clinical response was assessed after 6 months using established disease-specific response criteria.

Using a high-throughput assay measuring more than 1,000 inflammation-related proteins, investigators identified several proteins associated with treatment response. While principal component analysis found no clear overall differences between responders and non-responders, more detailed analyses revealed distinct protein signatures linked to therapeutic outcomes.

In the combined cohort, 16 proteins were significantly associated with anti-TNF response. Disease-specific analyses identified 22 candidate proteins in RA and a further 22 in axSpA. Receiver operating characteristic analysis highlighted one protein that consistently predicted treatment response across both diseases, with higher baseline levels observed in responders.

Several additional biomarkers demonstrated strong predictive performance in RA, with the top three proteins achieving area under the curve values of 0.85–0.86. In axSpA, the leading candidates showed moderate predictive accuracy, with area under the curve values ranging from 0.73–0.78. Statistical modelling confirmed independent associations between these candidate proteins and treatment response.

The authors concluded that baseline serum proteomic profiling has the potential to identify biomarkers capable of predicting response to anti-TNF therapy across inflammatory rheumatic diseases. Although the findings require validation in larger independent cohorts, they represent an important step towards precision medicine, with the potential to improve patient stratification before treatment begins.

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Metabolomic Signatures Link Liver Disease and Cardiovascular Risk in Inflammatory Arthritis

HEPATIC steatosis is common in patients who are not obese who have inflammatory arthritis, and is associated with distinct metabolic changes that may contribute to cardiovascular risk, according to research presented at EULAR 2026.[5]

Patients with rheumatoid arthritis (RA) and psoriatic arthritis (PsA) have an increased risk of cardiovascular disease, but the contribution of subclinical liver disease remains poorly understood. Researchers investigated the prevalence of hepatic steatosis and fibrosis using transient elastography and examined whether these abnormalities were associated with specific serum metabolomic profiles.

The cross-sectional study included 88 patients who were not obese and had inflammatory arthritis, comprising 49 with RA and 39 with PsA. All participants underwent liver assessment using FibroScan® (Echosens, Paris, France) and controlled attenuation parameter (CAP; Echosens), alongside comprehensive serum metabolomic profiling.

Despite generally low disease activity, hepatic steatosis was detected in 61.2% of patients with RA and 48.7% of those with PsA. Liver fibrosis was less common, affecting 4.1% of patients with RA and 12.8% of those with PsA.

Metabolomic analysis identified 74 metabolites that differed significantly between patients with and without hepatic steatosis. Higher CAP values were associated with elevated triglycerides, triglyceride-rich lipoproteins, branched-chain amino acids, alanine, and lactate, while patients with steatosis had lower levels of high-density lipoprotein cholesterol; fewer large, high-density lipoprotein particles; and reduced concentrations of polyunsaturated fatty acids.

Distinct metabolic signatures were also identified for liver fibrosis. Patients with fibrosis demonstrated alterations in very-low-density lipoprotein subfractions alongside changes in amino acids involved in energy metabolism. Multivariate analysis confirmed that these metabolomic profiles remained independently associated with hepatic steatosis and fibrosis after adjustment for age, sex, metabolic comorbidities, and treatment exposure.

The authors concluded that subclinical liver disease is common in inflammatory arthritis, even among patients who are not obese and have well-controlled disease. The associated metabolomic changes suggest an atherogenic and insulin-resistant phenotype, supporting the hypothesis that hepatic involvement may contribute to the increased cardiovascular risk observed in patients with RA and PsA.

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Teclistamab Demonstrates Durable Responses in Refractory Autoimmune Disease

THE B CELL maturation antigen (BCMA)-targeted T cell engager teclistamab produced clinical responses in patients with severe multidrug-resistant autoimmune diseases in new research presented at EULAR 2026.[6]

Multidrug-resistant autoimmune diseases remain a major challenge in rheumatology with many patients often failing multiple immunosuppressive and biologic therapies. Plasma cells are increasingly recognised as drivers of refractory autoimmunity because they continue producing pathogenic autoantibodies, despite conventional B cell depletion. Teclistamab as a bispecific T cell engager is already approved for multiple myeloma and is now being investigated in autoimmune diseases due to its potential to eliminate autoreactive B cells and plasma cells.

In this study, 16 patients with active multi-drug-resistant autoimmune diseases, including systemic sclerosis, idiopathic inflammatory myopathies, IgG4-related disease, rheumatoid arthritis, Sjögren's disease, and Graves' disease, received teclistamab through a named-patient use programme using an inpatient step-up dosing schedule followed by maintenance treatment. During therapy, glucocorticoids were tapered to low doses (<5 mg/day), and all other immunosuppressive medications were discontinued. Patients were followed for 9–100 weeks to assess safety and clinical outcomes.

Clinical responses were observed in 15 of the 16 patients, spanning multiple autoimmune diseases. Treatment led to rapid peripheral B cell depletion, alongside declines in disease-specific autoantibodies, with several patients achieving autoantibody seroconversion and normalisation of IgG4 levels. Nine patients achieved drug-free remission after a single course of treatment, with responses lasting a median of 11 months, while four patients experienced disease progression after a median of 5 months. Two patients who relapsed were retreated with teclistamab and both regained clinical responses.

The safety profile was consistent with the drug's mechanism of action. Cytokine release syndrome occurred in 13 of 16 patients, although all cases were Grade 1 or 2, developed within 48 hours of treatment initiation, and resolved after a single dose of tocilizumab. No Grade 3 or 4 cytokine release syndrome or neurotoxicity was reported. As expected with plasma cell depletion, all patients developed hypogammaglobulinaemia, which was managed with Ig replacement therapy. Two infections requiring antibiotic treatment, a urinary tract infection and pneumonia, were reported during follow-up.

Although the findings are limited by the small, heterogeneous patient cohort and the absence of a control group, they provide early evidence that BCMA-targeted T cell engagement may offer a potential treatment strategy for patients with severe, multidrug-resistant autoimmune diseases. Larger prospective studies with longer follow-up will be needed to confirm the durability of responses, further characterise the safety profile, and determine which patient populations are most likely to benefit.

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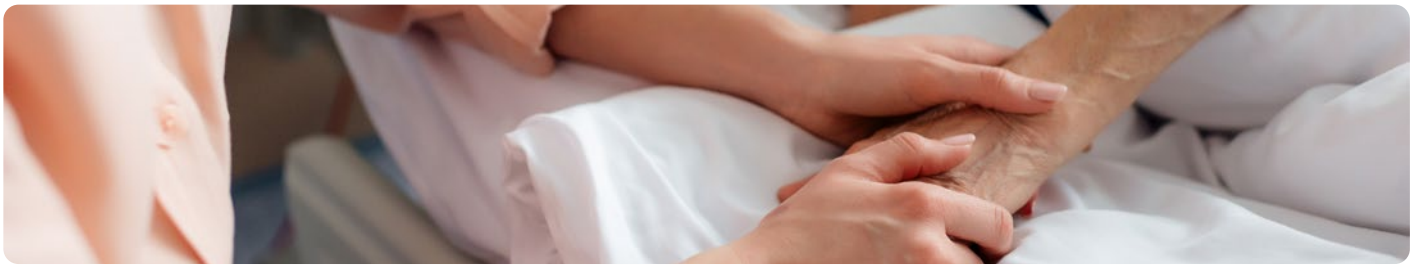
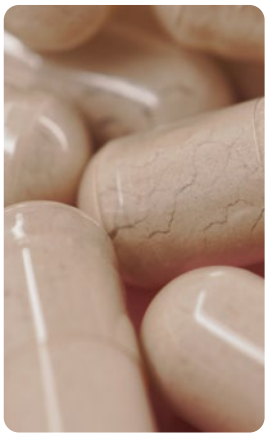


Dietary Fibre Supplement May Boost Methotrexate Response in Rheumatoid Arthritis

THIRTY days of dietary fibre supplementation improved clinical response and immune regulation in patients with rheumatoid arthritis (RA) receiving methotrexate (MTX), according to findings from the randomised, placebo-controlled Superfibres trial presented at EULAR 2026.[7] The results suggest that a simple nutritional intervention may enhance treatment efficacy through modulation of the gut microbiome and restoration of immune balance.



In MTX users, mean change in DAS28 was –1.00 with fibre compared with –0.34 with placebo

Increasing evidence indicates that gut dysbiosis contributes to RA pathogenesis by disrupting the balance between pro-inflammatory T helper 17 (Th17) cells and regulatory T (Treg) cells. Previous research has also suggested that the composition of the gut microbiota may influence response to MTX, the cornerstone treatment for RA. As dietary fibre promotes production of anti-inflammatory short-chain fatty acids, researchers investigated whether supplementation could improve disease activity and immune regulation.

The Superfibres trial enrolled 49 adults with active RA despite stable conventional synthetic disease-modifying antirheumatic drug (csDMARD) therapy. Participants were randomised to receive either 12 g/day of inulin fibre or placebo for 30 days. Investigators assessed EULAR treatment response, changes in circulating Th17 and Treg cells, and alterations in the gut microbiota using 16S ribosomal RNA sequencing.

Patients receiving dietary fibre were significantly more likely to achieve a EULAR response than those receiving placebo (odds ratio: 4.65; 95% CI: 1.15–18.90; p=0.03). Fibre supplementation also reduced circulating Th17 cells and improved the Th17/Treg ratio compared with placebo (p<0.02). Importantly, reductions in Th17 cells were observed only among patients who responded clinically to fibre supplementation.

The greatest benefit was seen among patients receiving background MTX therapy. A significant interaction between fibre supplementation and MTX treatment was identified (p=0.011). In MTX users, mean change in Disease Activity Score-28 (DAS28) was –1.00 with fibre compared with –0.34 with placebo, whereas no treatment effect was observed in the small subgroup not receiving MTX.

Exploratory microbiome analyses identified distinct bacterial signatures associated with both fibre supplementation and clinical response. Taxa linked to fibre supplementation included *Lachnospiraceae* NK4A136, *Paraprevotella*, *Romboutsia ilealis*, and *Clostridium celatum*. Clinical responders also demonstrated enrichment of several potentially beneficial bacteria, including *Bacteroides vulgatus*, *Bifidobacterium adolescentis*, *Bifidobacterium longum*, *Faecalibacterium prausnitzii*, *Collinsella aerofaciens*, *Lactococcus lactis*, and *Veillonella parvula*. Ongoing analyses of short-chain fatty acids and metagenomic data aim to further clarify the underlying mechanisms.

The intervention was well tolerated, with more than 90% compliance. The investigators concluded that dietary fibre may represent a safe, inexpensive adjunct to MTX therapy capable of improving both clinical outcomes and immune regulation in RA. If confirmed in larger studies, these findings could influence future clinical practice by incorporating dietary strategies alongside pharmacological treatment.

Tofacitinib Improves Remission in Patients with Early Axial Spondyloarthritis

EARLY treatment with tofacitinib significantly increased the proportion of patients with early active axial spondyloarthritis (axSpA) who achieved inactive disease after 16 weeks compared with placebo, according to a Phase IV study presented at EULAR 2026.[8] axSpA is a chronic inflammatory condition that primarily affects the spine and sacroiliac joints, causing persistent back pain and stiffness.

The study is the first clinical evaluation of an advanced therapy in patients meeting the Assessment of SpondyloArthritis International Society (ASAS) definition of early axSpA, which describes people with axial symptoms lasting 2 years or less.

Researchers enrolled 107 adults aged 18–45 years from Poland, Czechia, Germany, and Bulgaria with active early axSpA, objective signs of inflammation, and an inadequate response to at least one non-steroidal anti-inflammatory drug. Participants received either 5 mg of tofacitinib or placebo, with both groups taking 500 mg of naproxen twice daily for 16 weeks.

By Week 16, 26.4% of patients receiving tofacitinib achieved inactive disease compared with 7.4% receiving placebo (p=0.006). Patients receiving tofacitinib were also more likely to achieve inactive disease, low disease activity, clinically important improvement, and major improvement according to the Axial Spondyloarthritis Disease Activity Score (ASDAS), as well as ASAS 20% and 40% response criteria and partial remission.

Although the reduction in Spondyloarthritis Research Consortium of Canada (SPARCC) osteitis score on MRI of the sacroiliac joints was greater with tofacitinib than placebo, the difference between groups did not reach statistical significance.

Treatment escalation because of an inadequate early response occurred more frequently in the placebo group (57.4% versus 34.0%; p=0.012). Adverse events were reported in 50.9% of patients receiving tofacitinib and 33.3% receiving placebo, with infections and gastrointestinal disorders being the most common. There were no deaths or adverse events of special interest.

The results suggest tofacitinib could become an effective treatment option for carefully selected patients with early active axSpA, although longer-term studies may help determine whether the clinical benefits are sustained and whether imaging outcomes improve over time.

References

1. Khasho M et al. Post-acute COVID-19 outcomes in patients with rheumatologic disease: a large real-world cohort study. Abstract OP0115. EULAR Congress, 3-6 June, 2026.
2. Berthouzoz EC et al. Increasing lifetime smoking exposure among male rheumatoid arthritis patients despite declining current use in Switzerland. Abstract OP0109. EULAR Congress, 3-6 June, 2026.
3. Graf J et al. Rosnilimab, a selective and potent depleter of pathogenic T cells, demonstrates efficacy, safety and translational proof of mechanism in RENOIR, a Phase IIb trial in moderate-to-severe rheumatoid arthritis. Abstract OP0202. EULAR Congress, 3-6 June, 2026.
4. Rodríguez-Mauriz R et al. An exploratory proteomic study to identify biomarkers predicting response to anti-TNF therapy in inflammatory rheumatic diseases. Abstract AB0006. EULAR Congress, 3-6 June, 2026.
5. Ruiz-Ponce et al. Lipidomic changes associated to hepatic steatosis and fibrosis in inflammatory arthritis. Abstract AB0046. EULAR Congress, 3-6 June, 2026.
6. Boeltz S et al. BCMA-targeted T-cell engager teclistamab as rescue therapy for severe refractory autoimmune diseases. Presentation OP078. EULAR Congress, 3-6 June, 2026.
7. Immediato Daien C et al. Dietary fiber supplementation improves methotrexate-associated clinical response and Th17/Treg balance in rheumatoid arthritis: results from the Superfibres randomized trial. Abstract OP0207. EULAR Congress, 3-6 June, 2026.
8. Rodriguez VR et al. Tofacitinib in early active axial spondyloarthritis: results from the randomised, double-blind, placebo controlled, multicentre phase IV study, FASTLANE. Abstract OP0241. EULAR Congress, 3-6 June, 2026.