

Biomarkers in Rheumatoid Arthritis

Rheumatoid arthritis (RA) is a destructive immune-mediated disease of the joints characterized by inflammation in the joint lining (or synovium), leading to joint damage with chronic pain, stiffness and swelling.^{1,2}



What are Biomarkers?

Biomarkers, or measurable biological signals, can provide clues to diagnosis, insights into overall prognosis, and can sometimes be used to predict which patients might respond to specific treatments.



Some people with RA have **a more highly active form of the disease** that can lead to worse outcomes if left untreated or undertreated.^{3,4}

These individuals often test positive (referred to as seropositive) for biomarkers called autoantibodies known as **anti-citrullinated protein antibody (ACPA)** and **rheumatoid factor (RF)**.

Autoantibodies, produced by the immune system, are antibodies directed against an individual's own proteins and are the cause of many immune-mediated disorders.



ACPA and RF may contribute to inflammation and joint damage seen in RA. They can be detected with a blood test before joint damage becomes apparent.^{3,4}

There is also a genetic marker known as the **shared epitope** that can lead to a more severe disease course, which occurs in about **70%-80%** of seropositive patients.⁴⁻⁶

The insight provided by RA biomarkers emphasizes the need for a **precision-medicine focused approach** to RA management.

Taking a Precision-Medicine Focused Approach to Care

Biomarkers like RF and ACPA can be used to predict the development of RA years before symptom onset, enabling monitoring and treatment much earlier, before significant damage has been done.⁷



There is also emerging evidence that RF and ACPA may be useful in informing treatment strategies, including indicating who might respond to specific therapies and monitoring how well a treatment is working.⁷

Early treatment is crucial in RA because delayed intervention increases the risk of joint damage and subsequent impact on quality of life. Though RA is a chronic condition, early treatment is a key factor in the possibility of remission.^{2,8}

Bristol Myers Squibb remains committed to advancing biomarker science to improve care and expand treatment options for patients with immune-mediated diseases.

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