Editorial
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Insights of Rheumatoid Arthritis & Genetic Biomarkers

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Editorial

Microarray study of gene expression profiling Treatment with drugs for microarray analysis: Prior to therapy, HFLS-RA cells were seeded in 75 cm^2 culture flasks for 24 hours. MTX IC50 concentrations were used to treat the cells.

The genetics of autoimmune diseases is a rapidly expanding field that is outpacing biomarker performance. Rheumatoid Arthritis (RA) has no clear cause, although it is believed to have both genetic and environmental roots. Genetic biomarkers have the potential to change the way RA is managed by allowing not only the identification of susceptible individuals, but also the monitoring of their progress, but also early detection, assessment of disease seriousness, treatment selection, and follow-up on treatment response. This study focuses on both the genetic biomarkers of RA and the methods for identifying them. Many of the RA genetic biomarkers that have been discovered have been found in populations of European and Asian ancestry. Additional human populations may produce unexpected results. To express the importance of their findings, most researchers in the field of identifying RA biomarkers use single nucleotide polymorphism (SNP) approaches. Haplotype block approaches, on the other hand, are expected to play a complementary role in the field's future.

In comparison to other disease-modifying anti-rheumatic medications, methotrexate (MTX) is the most favoured treatment after a diagnosis has been verified (nras.org.uk/MTX). The optimum doses of MTX are determined using a combination of clinical diagnosis and lab tests (e.g., CRP) to track disease activity. CRP measurements are important in the management and prognosis of RA because patients with persistently elevated CRP levels are at risk of bone deterioration and need aggressive treatment strategies. CRP levels that are within reasonable limits provide doctors with an indicator of the medication's clinical efficacy. CRP is used as a diagnostic and predictive biomarker for RA, although it has drawbacks because approximately 40% of patients with RA have normal CRP levels, and elevated levels have been observed in conditions other than RA, such as inflammatory bowel disease and tuberculosis. Identifying accurate diagnostic and predictive biomarkers will ensure a successful early diagnosis of the disorder and a more reliable monitoring regimen of patient response to therapy due to shortcomings in the diagnosis of RA during the early stages of the disease.

Microarray study of gene expression profiling

HFLS-RA cells were seeded in 75 cm^2 culture flasks for 24 hours prior to treatment for microarray analysis. MTX IC50 concentrations were used to treat the cells.

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