# Article information:

Novel gene variants associated with cardiovascular disease in systemic lupus erythematosus and rheumatoid arthritis | Annals of the Rheumatic Diseases
<https://ard.bmj.com/content/77/7/1063.abstract>

# Article summary:

1. Patients with systemic lupus erythematosus (SLE) and rheumatoid arthritis (RA) have an increased risk of cardiovascular disease (CVD).

2. Two novel gene variants, IL19 and SRP54-AS1, were found to be associated with an increased risk of stroke/myocardial infarction in SLE and RA patients.

3. The IL19 risk allele affected protein binding and was associated with increased levels of plasma-IL10 and antiphospholipid antibodies in SLE patients.

# Article rating:

Appears moderately imbalanced: The article provides some useful information, but is missing several important points or pieces of evidence that would be required to present the discussed topics in a balanced and reliable way. You are encouraged to seek a more balanced perspective on the presented issues by exploring the provided research topics and looking at different information sources.

# Article analysis:

The article titled "Novel gene variants associated with cardiovascular disease in systemic lupus erythematosus and rheumatoid arthritis" discusses the association between certain gene variants and cardiovascular disease (CVD) in patients with systemic lupus erythematosus (SLE) and rheumatoid arthritis (RA). The study aims to identify single nucleotide polymorphisms (SNPs) at autoimmunity risk loci that may be linked to CVD in these patient populations.

One potential bias in this article is the lack of a control group. While the study compares allele frequencies between patients with and without different manifestations of CVD, it does not include a control group of individuals without SLE or RA. This makes it difficult to determine if the identified gene variants are specific to these diseases or if they are also present in the general population.

Additionally, the article does not provide information on how the patients were selected for inclusion in the study. It is unclear if they were randomly selected or if there were specific criteria for inclusion. This lack of information raises questions about the representativeness of the patient populations and whether the findings can be generalized to other SLE and RA patients.

The article also lacks discussion on potential confounding factors that may influence the association between gene variants and CVD. For example, lifestyle factors such as smoking, diet, and physical activity can significantly impact an individual's risk of developing CVD. Without accounting for these factors, it is challenging to attribute any observed associations solely to gene variants.

Furthermore, while the article mentions replication of results in a second SLE cohort and an RA cohort, it does not provide detailed information on these cohorts or their characteristics. This lack of transparency makes it difficult to assess the reliability and validity of the findings.

The claims made in this article are largely supported by evidence from genetic analyses, but there is limited exploration of potential mechanisms underlying these associations. The authors briefly mention that the IL19 risk allele affects protein binding and that SLE patients with this allele have increased levels of plasma-IL10 and antiphospholipid antibodies. However, further investigation into these mechanisms would provide a more comprehensive understanding of the link between gene variants and CVD.

Overall, this article provides some interesting findings regarding the association between gene variants and CVD in SLE and RA patients. However, there are several limitations and biases that should be considered when interpreting the results. Further research is needed to confirm these associations, explore potential mechanisms, and account for confounding factors.

# Topics for further research:

* Mechanisms underlying the association between gene variants and cardiovascular disease in systemic lupus erythematosus and rheumatoid arthritis
* Lifestyle factors and their impact on cardiovascular disease risk in patients with systemic lupus erythematosus and rheumatoid arthritis
* Characteristics and representativeness of the patient populations in studies on gene variants and cardiovascular disease in systemic lupus erythematosus and rheumatoid arthritis
* Replication of results in different cohorts of systemic lupus erythematosus and rheumatoid arthritis patients
* Role of IL19 risk allele in protein binding and its relationship with plasma-IL10 levels and antiphospholipid antibodies in systemic lupus erythematosus patients
* Potential confounding factors in the association between gene variants and cardiovascular disease in systemic lupus erythematosus and rheumatoid arthritis patients.

# Report location:

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