# Article information:

A guide to performing Polygenic Risk Score analyses - PMC  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7612115/>

# Article summary:

1. Polygenic risk scores (PRS) are widely used in biomedical research to assess shared aetiology between phenotypes, evaluate the clinical utility of genetic data for common disease, and as part of experimental studies.

2. PRS can be calculated using different methods and require standard quality control steps to ensure accuracy and consistency between studies.

3. PRS provide an estimate of genetic propensity to a trait at the individual level and are suitable for a range of applications, including identifying shared aetiology among traits, testing for gene-environment and gene-gene interactions, performing Mendelian Randomisation studies, and patient stratification and sub-phenotyping. However, there are minimal guidelines on how best to perform and interpret PRS analyses.

# 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:

该文章提供了关于进行多基因风险评分（PRS）分析的详细指南。它讨论了计算PRS的不同方法，概述了标准的质量控制步骤，并提供了一个在线教程。然而，该文章存在一些偏见和缺失。

首先，该文章没有充分考虑PRS的局限性。虽然PRS可以用于预测个体对某种疾病的遗传易感性，但其预测能力仍有限。此外，由于GWAS中使用的SNP只是基因组中所有变异的一小部分，因此PRS可能会忽略其他重要的遗传变异。

其次，该文章没有充分考虑PRS在不同人群之间的适用性问题。由于不同人群之间存在基因频率差异和遗传结构差异，因此在将PRS应用于不同人群时需要谨慎处理。

最后，该文章没有充分考虑与PRS相关的伦理和社会问题。例如，在使用PRS进行个体化医疗时需要注意隐私保护和公平性等问题。

综上所述，尽管该文章提供了有价值的指南和建议，但它也存在一些偏见和缺失。在使用PRS时需要全面考虑其局限性、适用性和伦理问题。

# Topics for further research:

* Limitations of PRS
* Applicability of PRS across different populations
* Other important genetic variations not captured by PRS
* Ethical and social issues related to PRS
* Comprehensive consideration of PRS limitations
* applicability
* and ethical issues
* Further exploration of PRS-related topics

# Report location:

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