

REFERENCES

- T.A. Brown. Genomes, Second Edition. Wiley-Liss, Oxford, 2002. ISBN 9780471250463.
- S.W. Choi, T.S.H. Mak, and P. O'Reilly. Tutorial: A guide to performing polygenic risk score analyses. *Nature Protocols*, 15(9):2759–2772, 2020. doi: 10.1038/s41596-020-0353-1.
- D.S. Falconer. The inheritance of liability to certain diseases, estimated from the incidence among relatives. *Annals of Human Genetics*, 29(1):51–76, 1965. doi: 10.1111/j.1469-1809.1965.tb00500.x.
- D.S. Falconer and T.F.C. Mackay. *Introduction to Quantitative Genetics*, Fourth Edition. Longman Scientific Technical, 1996. ISBN 9780582243026.
- C. Gutiérrez, A. Macdonald, and S. Angus. Adult polycystic kidney disease and critical illness insurance. *North American Actuarial Journal*, 7(2):93–115, 2003. doi: 10.1080/10920277.2003.10596100.
- O. Haçarız, A. Macdonald, and others. Genetics, insurance, and hypertrophic cardiomyopathy: Evaluating underwriting practices. *International Actuarial Journal*, 20(3):377–402, 2020. doi: 10.1080/10920277.2020.1712654.
- O. Haçarız, A. Macdonald, and others. An actuarial model of arrhythmogenic right ventricular cardiomyopathy and life insurance. *Annals of Actuarial Science*, 16(2):274–303, 2022. doi: 10.1017/S1748499522000047.
- A.V. Khera, M. Chaffin, K.G. Aragam, et al. Genome-wide polygenic scores for common disease identify individuals with risk equivalent to monogenic mutations. *Nature Genetics*, 50(9):1219–1224, 2018. doi: 10.1038/s41588-018-0183-z.

- M. Liu. Measuring performance: AUC (Area under the curve) – ROC (Receiver operating characteristic). Glassbox Medicine, 2019. URL <https://glassboxmedicine.com/2019/02/23/measuring-performance-auc-roc/>
- A.S. Macdonald. Genetic testing and actuarial science. Institute and Faculty of Actuaries, UK, 2024.
- J.M. Maxwell, R.A. Russell, H.M. Wu, N. Sharapova, P. Banthorpe, P.F. O'Reilly, and C.M. Lewis. Multifactorial disorders and polygenic risk scores: Predicting common diseases and the possibility of adverse selection in life and protection insurance. *Annals of Actuarial Science*, 15(3):488–503, 2021. doi: 10.1017/S1748499521000022.
- T. Ohira, E. Eguchi, F. Hayashi, et al. Epidemiology of cardiovascular disease in Japan: An overview study. *Journal of Cardiology*, 77(2):191–200, 2021. doi: 10.1016/j.jjcc.2020.10.007.
- Y.S. Park, H.M. Jang, J.H. Park, et al. Evaluation of cardiovascular disease risk stratification using multiple-polygenic risk scores and pooled cohort equations: Insights from a 17-year longitudinal Korean cohort study. *Frontiers in Genetics*, 15:1416232, 2024. doi: 10.3389/fgene.2024.1416232.
- K. Supriami, S.M. Urbut, J.R. Tello-Ayala, et al. Genomic drivers of coronary artery disease and risk of future outcomes after coronary angiography. *JAMA Network Open*, 8(3):e243567, 2025. doi: 10.1001/jamanetworkopen.2025.3567.
- A. McCormick. Morbidity Statistics from General Practice: Fourth National Study. Office of Population Censuses and Surveys, 1995.
- T.C. Turin, Y. Kokubo, Y. Murakami, et al. Lifetime risk of acute myocardial infarction in Japan. *Circulation: Cardiovascular Quality and Outcomes*, 3(6):701–707, 2010. doi: 10.1161/CIRCOUTCOMES.110.957738.
- K. Wang, X. Shi, X.J. Hao, et al. Mendelian randomization analysis of 37 clinical factors in East Asian and European populations. *Genome Medicine*, 13(1):153, 2021. doi: 10.1186/s13073-021-00979-3.

- N.R. Wray, T. Lin, J. Austin, J.J. McGrath, I.B. Hickie, G.K. Murray, and P.M. Visscher. From basic science to clinical application of polygenic risk scores: A primer. *JAMA Psychiatry*, 78(1):101–109, 2021. doi: 10.1001/jamapsychiatry.2020.3049.
- J.B. Zhao, M. Salter-Townshend, and A. O’Hagan. A simulation study for multifactorial genetic disorders to quantify the impact of polygenic risk scores on critical illness insurance. *Annals of Actuarial Science*, 17(1):1–23, 2023. doi: 10.1017/S1748499522000151.