

GENETICS, PHILOSOPHY

PREDICTING LIFE SPAN – AN ETHICAL NIGHTMARE

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One of the most fascinating articles earlier this year was the report of Timmers et al. about the “[Genomics of 1 million parent lifespans implicates novel pathways and common diseases and distinguishes survival chances](#)”. The British-Swiss-Estonian-Chinese-US collaboration identified by genome-wide SNP association of 1 million parental lifespan some new genes (ABO, ZC3HC1, and IGF2R) and replicate others (CDKN2B-AS1, ATXN2/BRAP, FURIN/FES, ZW10, PSORS1C3, 5q33.3/EBF1 and FOXO3).

Most of the variance is explained by disease variants that lead to dementia, cardiovascular disease, and lung cancer – of course people die of disease and not by bad genes. So whether correct or not, what worries me more is the construction of polygenic risk scores that show a mean lifespan difference of around five years of life across the deciles.

This may become an ethical nightmare whenever treatment allocation will depend on a polygenic risk score that is largely irrelevant in an individual.

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