

# Genetic testing will change private insurance markets, but how?

“Striking a balance between rising premiums and genetic discrimination is a regulatory dilemma”

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The precision of genetic tests is increasing fast, as is the commercial interest in offering consumers genetic tests to predict their lifetime risk of developing medical conditions. Consumers could use such genetic information to their advantage when they purchase insurance, which could lead to rising premiums. If insurers would underwrite genetic risks in return, this could lead to genetic discrimination. Thus, genetic testing puts the regulatory dilemma between affordable insurance policies and the prevention of discrimination into the spotlight.

## Principal Findings

- Genetic (polygenic) risk scores can already classify mortality risks at a level that is comparable with traditional insurance risk factors such as biological sex, smoking, or having cancer.
- People in the highest 10% of genetic risk for 27 common diseases or mortality factors have 4.5 years shorter median lifespan than those in the lowest 10% of genetic risk.
- The precision of genetic risk scores will increase further because the size of genetic studies keeps growing rapidly.
- Consumer genetic testing could increase adverse selection (people choosing insurance to their advantage based on their genetic profile) leading to higher insurance premiums.

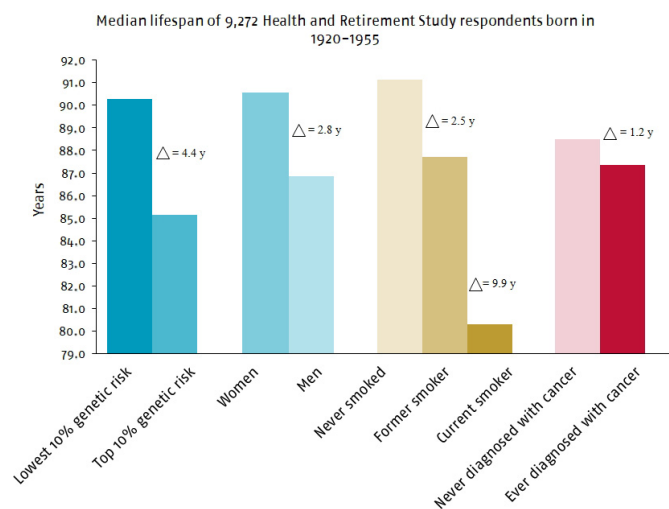


Figure: In a comparison of lifespan predictors, the genetic risk distinguishes a greater difference in median lifespan than sex, former smoking, and cancer.

## Key Takeaways for the Industry

- Policymakers need to strike a balance between keeping private insurance fair and viable while protecting consumers against genetic discrimination and privacy violations.
- International agreements are needed to regulate consumer genetics as samples can be sent between countries and not all commercial genetic tests are accurate enough or explained properly.



Want to know more? Read the paper

**'Genetic health risks, insurance and retirement'**