


**Post-mortem Genetic and Polygenic Profiling:  
Informing Risk to Living Relatives**

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NAME 2018 Annual Meeting

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**Disclosures**

**I am a shareholder of Human Longevity, Inc.**

**I receive grant support from the National Institute of Health.**




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**Utility of Genetics in the Dead**

**Cause of Death**      **Identity**

**Molecular Autopsy for Sudden Unexpected Death**

**DNA Confirms: Here Lieth Richard III, Under Yon Parking Lot**


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### Utility of “Molecular Autopsy” to the Living

Medical examiner says job is about both life and death

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### What about genetic risk for early “normal” death?

e.g. Coronary artery disease related death before 50 years of age

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### Early Heart Attack Heritability

**Table 12-1. OR for Combinations of Parental Heart Attack History**

Parental Heart Attack History	OR (95% CI)
No family history	1.00
One parent with heart attack at $\geq 50$ y of age	1.67 (1.55–1.81)
One parent with heart attack at $< 50$ y of age	2.36 (1.89–2.95)
Both parents with heart attack at $\geq 50$ y of age	2.90 (2.30–3.66)
Both parents with heart attack, 1 at $< 50$ y of age	3.26 (1.72–6.18)
Both parents with heart attack, both at $< 50$ y of age	6.56 (1.39–30.95)

OR indicates odds ratio; CI, confidence interval.  
Data derived from Chow et al.<sup>4</sup>

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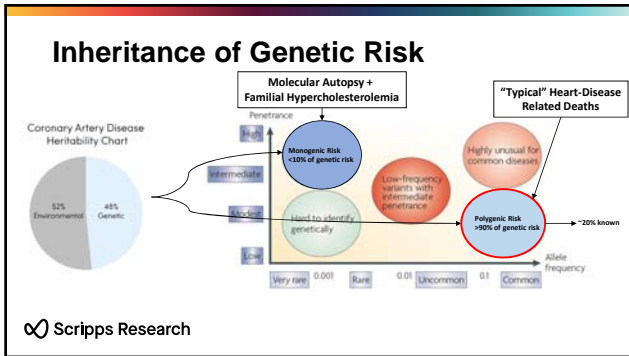
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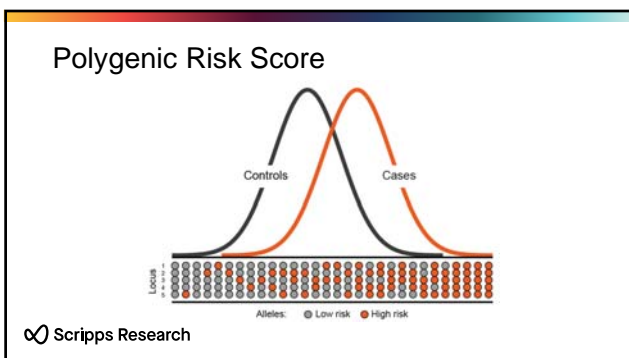
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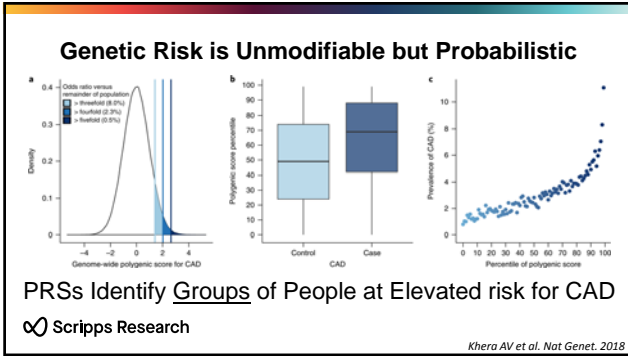
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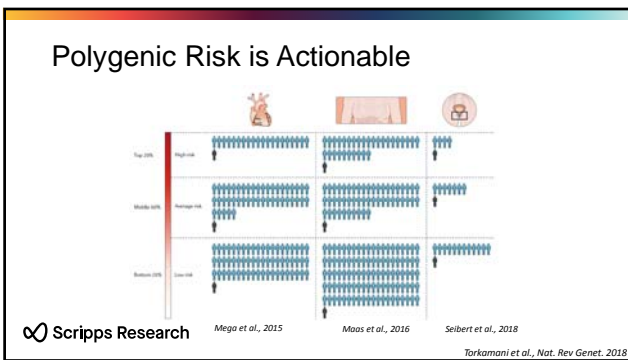
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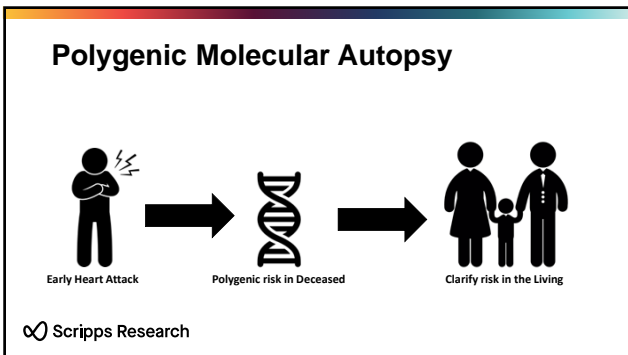
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## The Rise of Personal Genetic Testing Services



~17 million tests sold  
Polygenic risk possible but unavailable

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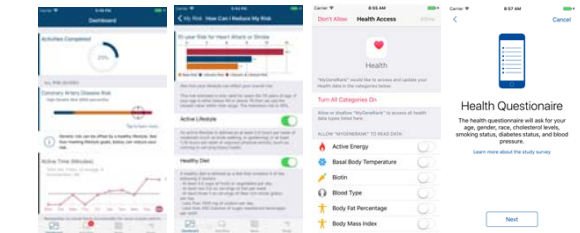
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## MyGeneRank



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mygenerank.scripps.edu

Current Requirements

- iOS Device
- 23andMe Data

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[TranslationalInstitute.org](http://TranslationalInstitute.org)

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