

“AN INSTANT CLASSIC”

- DAVID ANSEN, *NEWSWEEK*



TOMMY LEE
JONES

JAVIER
BARDEM

JOSH
BROLIN

**A COUNTRY
FOR OLD MEN**



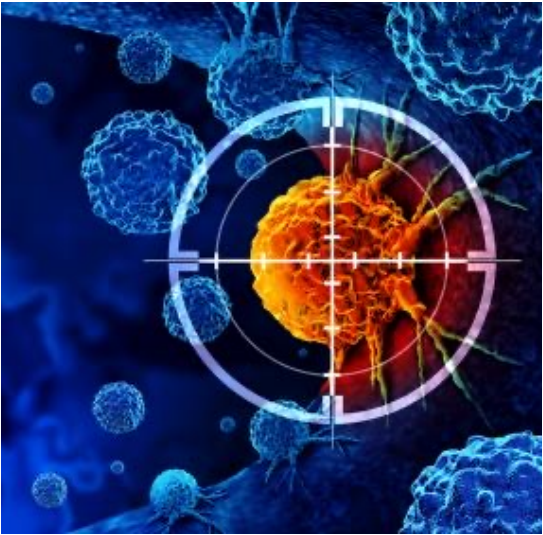


**Genomics: No room for
precision medicine in
the land of precision
watches?**

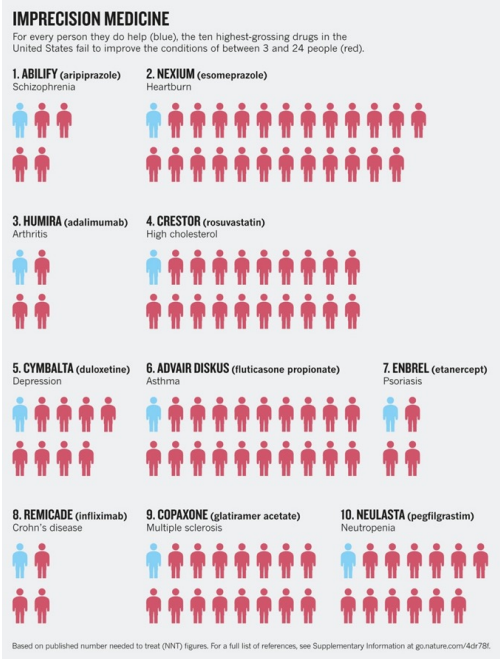


Genomic medicine - today

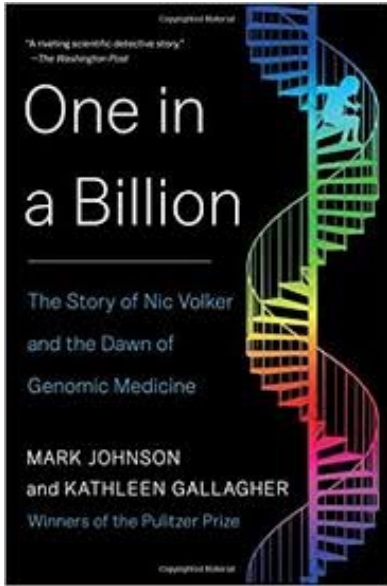
Precision oncology



Pharmacogenetics

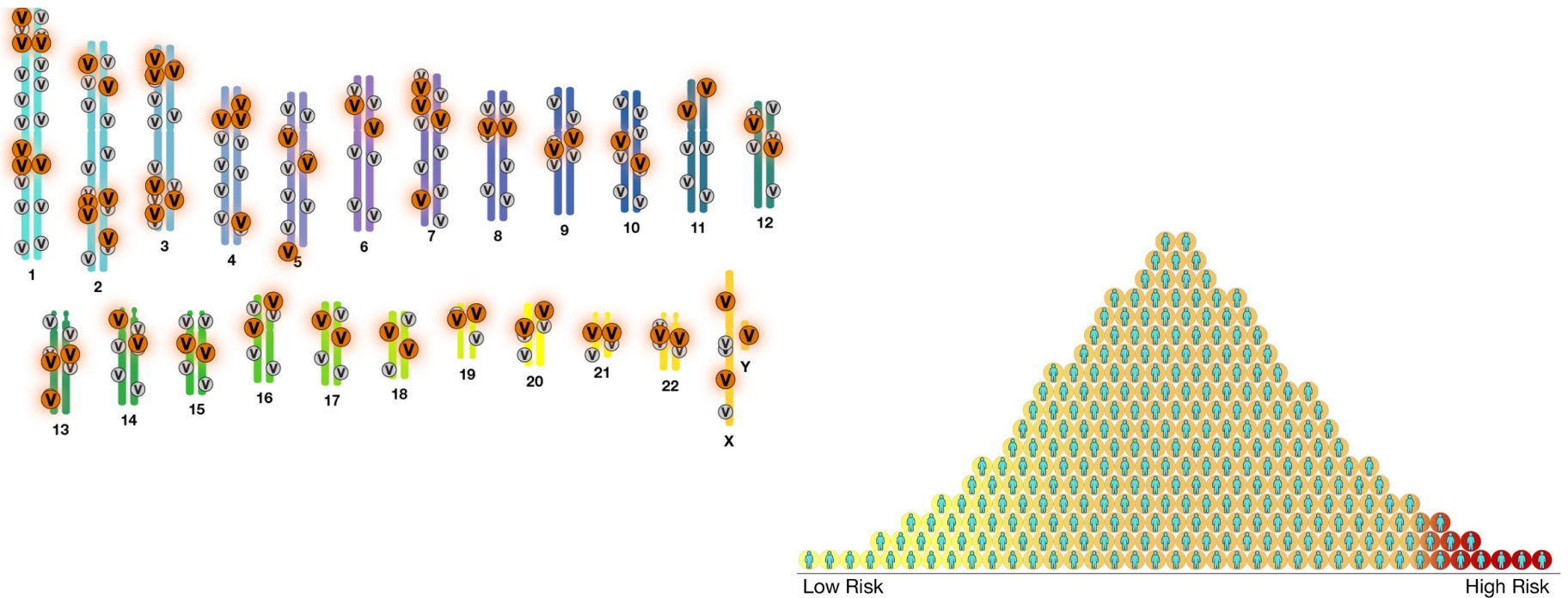


Rare diseases



Genomic medicine - tomorrow

Polygenic risk scores



<https://www.genome.gov/Health/Genomics-and-Medicine/Polygenic-risk-scores>

Polygenic risk scores

Genomics plc and MassMutual's program enables more policyowners to understand health risks through innovative genetic testing

April 10th, 2024

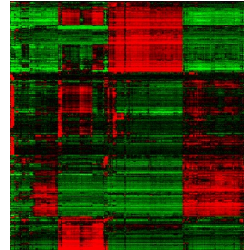
The program offers eligible MassMutual policyowners aged 35-70 access to polygenic risk testing via a saliva test that identifies hidden risk for eight common conditions: atrial fibrillation, breast or prostate cancer (depending on biological sex), cardiovascular disease, high blood pressure, high low-density lipoprotein cholesterol, low bone density and type 2 diabetes.

In addition to learning about their risk for each of the conditions, policyowners also receive actionable, tailored health advice and a report they can review with their doctor to reduce the chances of developing the condition.

Exposome



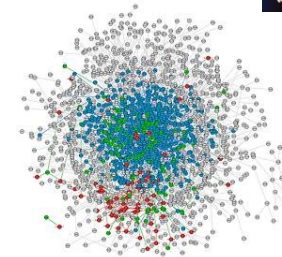
Epigenome



Transcriptome



Genome



Proteome

Life style



Metabolome



Metagenome

Social networks



Socio-economic conditions



Genomic medicine across the world

- United Kingdom:

As of 30 November 2023, the UK Biobank has unveiled data from whole genome sequencing of its **half a million** participants.

- United States:

'All of Us' Research Program (NIH) aims for **1 million** genomes.

- Japan:

Development of the JG1 (Japanese reference genome)

- United Arab Emirates:

The Emirati Genome Programme, using AI for genomic data.

350'000 human genomes

Egypt: **100,000 genomes**

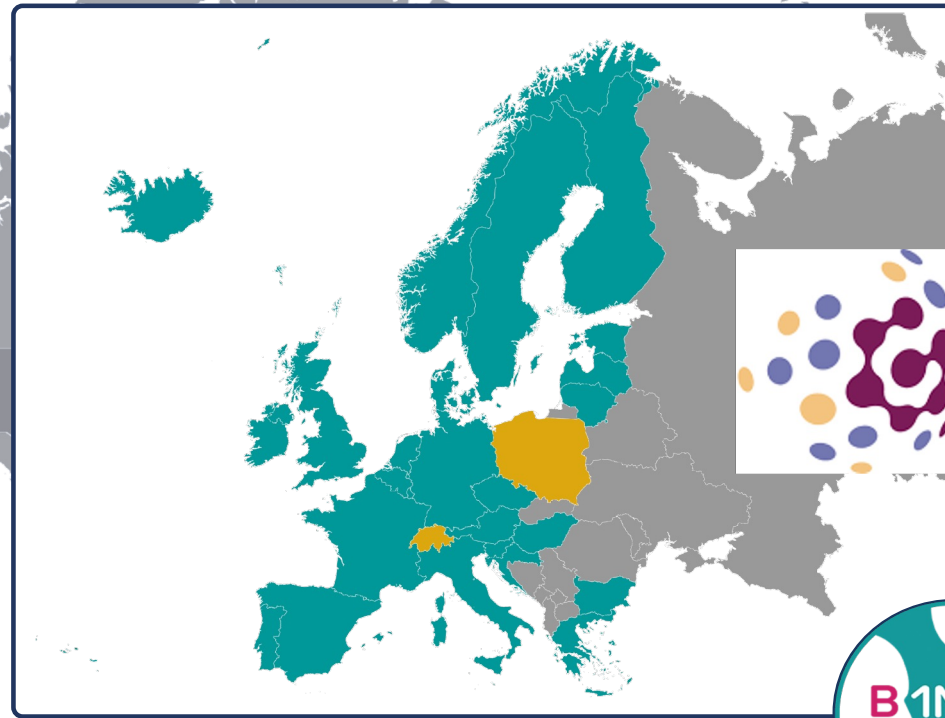
->Personalized and preventive healthcare.

->Personalized genetic research

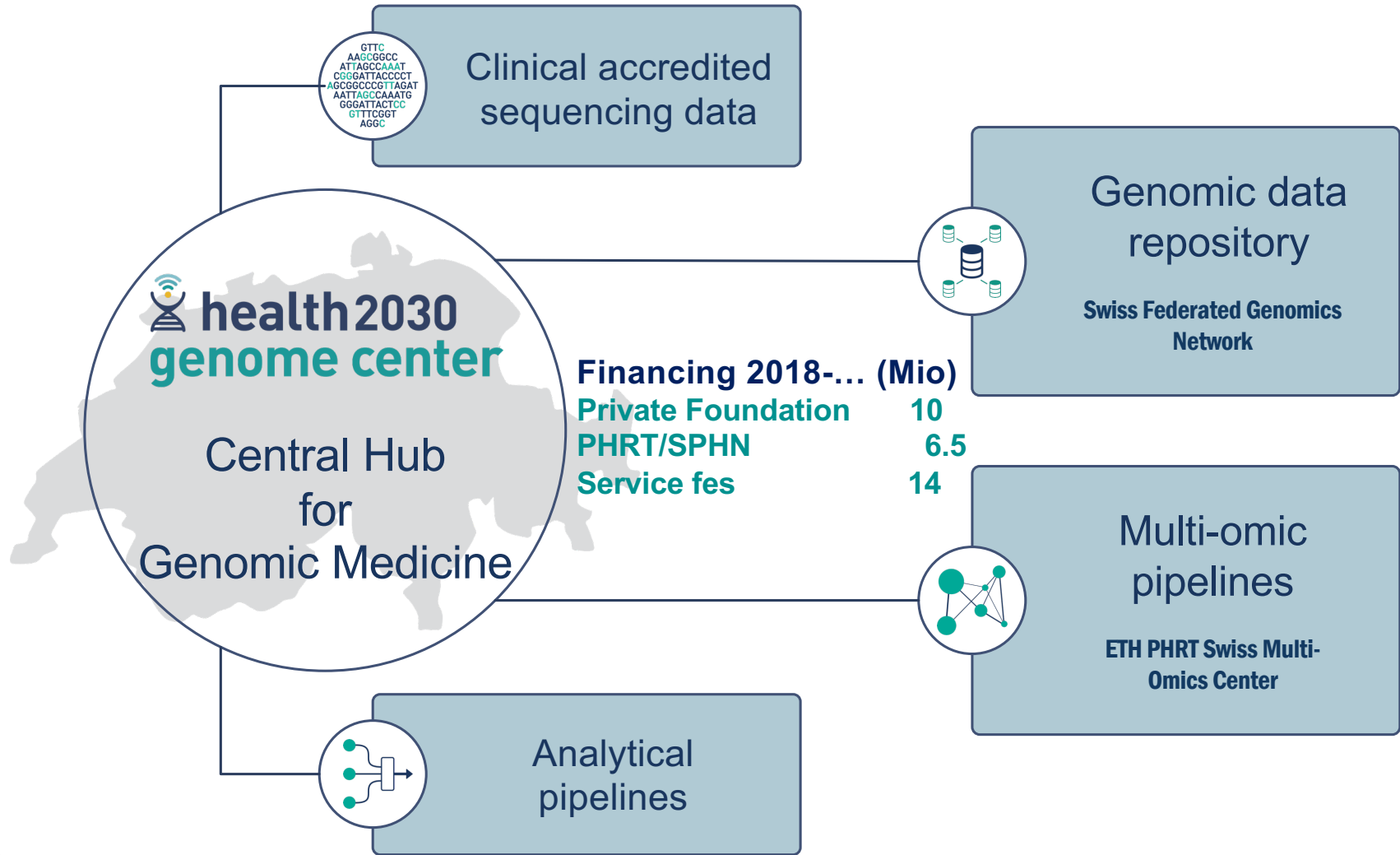
->Enhancing clinical analysis for rare diseases.



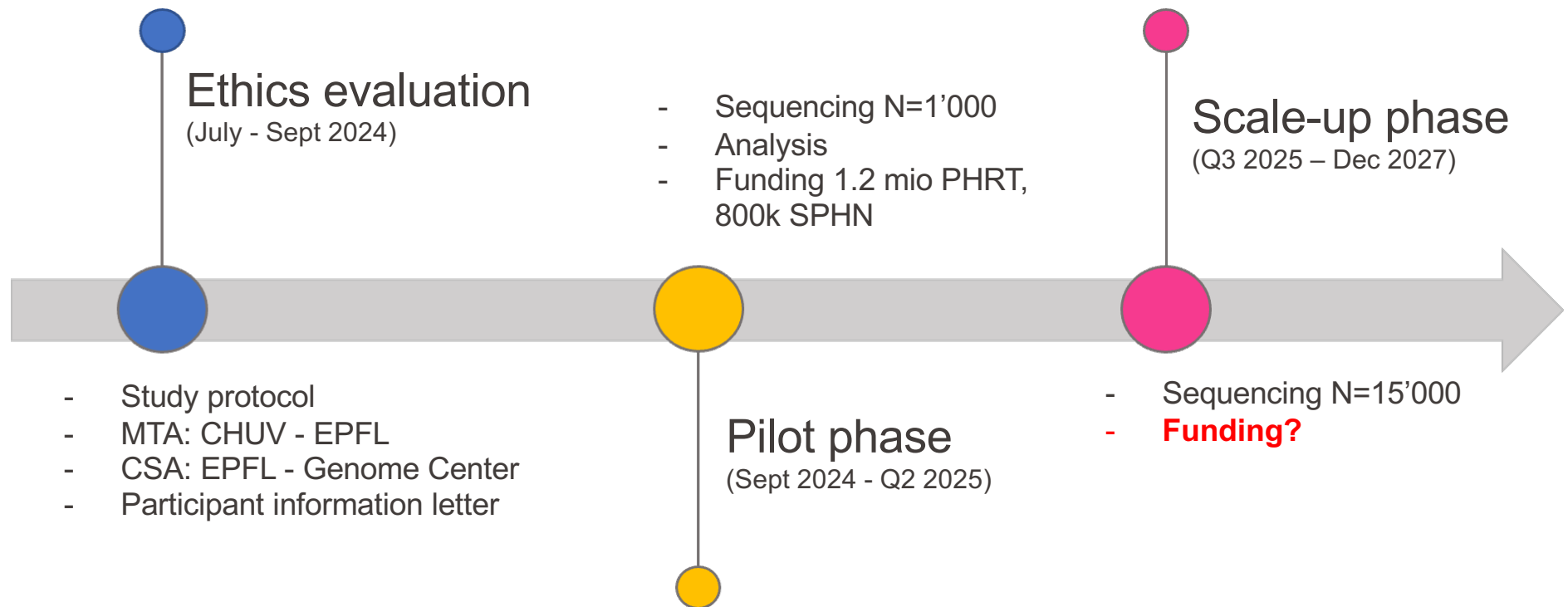
Pan-European genomic medicine initiatives



Genome of Europe



Genome of Switzerland



Questions

Switzerland did not contribute to the sequencing of the human genome; should it similarly stay out of international large-scale genome sequencing efforts?

- Has Switzerland simply no choice because it has neither the brain-power nor the technological or financial means to participate in this type of effort?
- Should it thus opt instead for a “no worry we’ll simply buy it” strategy?

Can the technical competence and background data necessary for the practice of precision medicine / personalized health be acquired without performing large-scale genome sequencing?

Should projects such as the Genome of Switzerland be financed through private or public funding?

Is Genome of Switzerland a research project or a public health initiative geared towards prevention / personalized health?