

Genomics data & Covid Before, during and after

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Pre-Covid'19 Era

20 years to reach \$100 genome (whole genome sequencing)

Genomics England - 100k genomes

- Rare disease
- Cancer research

14 other national genomic-medicine initiatives

Direct-to-consumer testing

Gene therapies

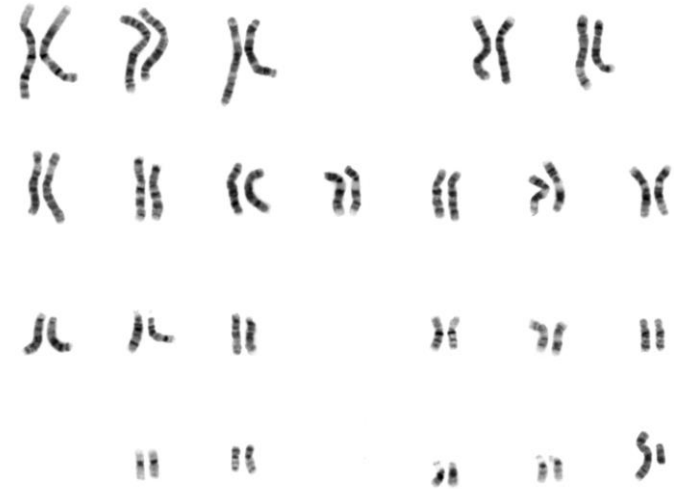


Image of 46 chromosomes

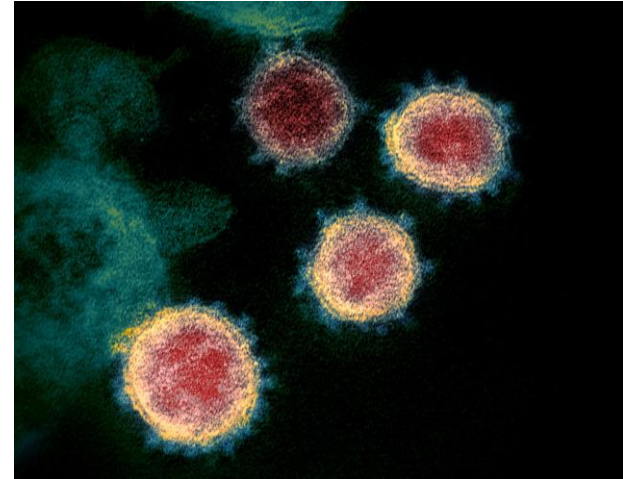
During pandemic

Genomics analysis from the very beginning - by 10.01.2020 virus was isolated, sequenced and information published!

Host Genetics Initiative

Value of large health data repositories - e.g. neanderthal genetic variant reduces the risk of severe illness (by ~22%)

Vaccines in mass production within 1 year!



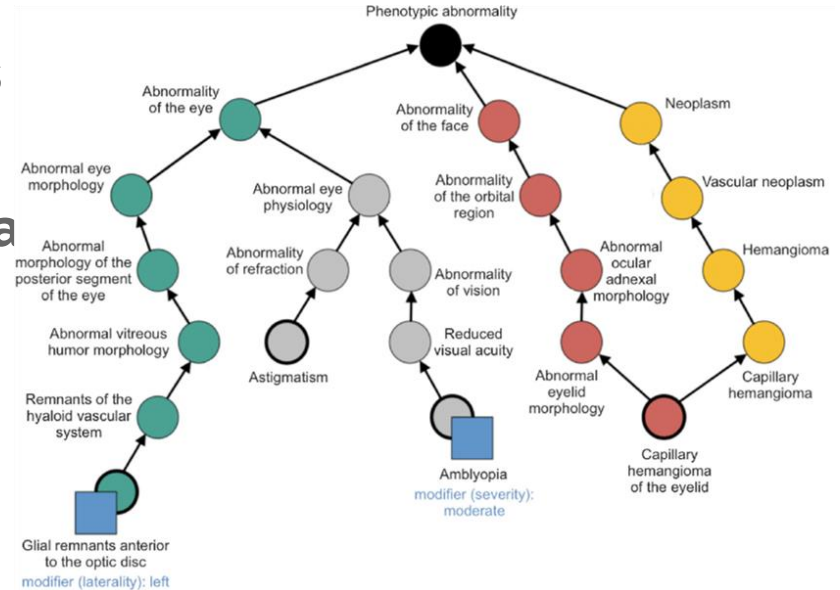
After Covid'19

Collecting and using medical data is becoming acceptable

Centralised data silos is utopia - data sharing is a necessity

ML/AI needs high quality data

Data is a new currency



Example of hierarchical (tree) structure of data in the Human Phenotype Ontology (HPO).



Thank you!

Any questions?

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