

## Will genome sequencing provide impediment to medicine?

Genomics is increasingly hailed by many as the turning point in modern medicine. Advances in technology now mean we're able to make out the full DNA sequence of an organism and decipher its entire hereditary information, bringing us closer to discovering the causes of particular diseases and disorders and drugs that can be targeted to the individual.

Buzzwords like “whole genome sequencing” and “personalised medicine” are everywhere – but how are they enabling a powerful medical and societal revolution?

Genome sequencing is being used today in diagnostic and clinical settings to find rare variants in a patient's genome, or to sequence cancers' genomes (to point out genomic differences between solid tumours and develop a more effective therapeutic strategy). It is also possible to test for known simple mutations via a process called genotyping, which can find genetic differences through a set of biomarkers. In the case of thalassemia, for example, there are mutations in the HBB gene on chromosome 11.

However, the availability of a patient's fully sequenced genome will only make it easier and quicker to run complex tests, using computational algorithms (the data analysis tools we use to search and process digital information) as opposed to more expensive and slower biological tests.

With costs likely to drop below that of an MRI scan (hundreds of pounds in the UK, thousands of dollars in the US), it is inevitable that sequencing will become an important part of our healthcare system – provided that the right tools for data analysis are developed alongside sequencing technologies.

**Read full, original article:** [Sequencing you genome is becoming an affordable reality – but at what personal cost?](#)