ICON
A Symbol of Excellence

The 100,000 Genomes Project

The largest coordinated genome study in the world promises to accelerate the diagnosis and treatment of cancers and rare diseases, making personalised medicine a reality

£££££
£550 million
UK government funded

100,000 genomes

11
industry partners

70,000 patients

80 hospitals
13 NHS Genomic Medicine Centres

Genomics Generation™

3bn

What is a Genome?
A genome is one whole set of all of a body's genes plus the DNA between the genes. Each genome contains 3 billion letters of genetic code

Cancer patients will have their genome sequenced twice: once for normal cells and once for tumour cells

Improved chances of correct first time diagnosis and appropriate treatment for patients with rare diseases (typically children)

How can understanding genomes help treat disease?

Scientists can identify shared genetic mutations that may be disrupting normal functions

5-10% of all cancers have inherited genetic risk factors

80% of rare and orphan diseases are linked to genetic mutations

With this knowledge, doctors can match the right drug to the right patient

1/3 For HER2-positive breast cancer patients, the drug Hercpetin reduces mortality by one third

55% For cystic fibrosis patients with a specific errant letter in the CTFR gene's code, the drug Ivacaftor reduces risk of pulmonary exacerbation by 55%

Personalised medicine will mean better treatments, better outcomes and more cost effective healthcare systems

1/2 For non-small cell lung cancer patients who have cancer cells with ALK gene fusions, the drug Xalkori diminishes tumours in more than half of patients

As data management partner for the 100,000 Genomes Project, ICON is helping to advance personalised medicine

200GB

Each genome will occupy about 200GB, or most of an average laptop's hard drive

Genomics science generates large volumes of new and complex data

Patient medical histories to total millions of data points

www.iconplc.com/genomics