Our understanding of the underlying biology of cancer, and the genomic characteristics of individual tumours, has increased dramatically over the last decade.1

Precision medicine in cancer The latest advancement in personalised healthcare

This knowledge is changing how cancer is viewed, diagnosed and treated — marking a seismic shift towards a more personalised approach to today’s cancer care.

Instead of defining and treating cancer based on its origin in the body...

...we now know that genomic alterations or ‘miscodings’ can drive cancer growth by disrupting normal cell signalling.2

![FAST FACT]
Gene mutations, fusions or rearrangements are all different types of genomic alterations that can result in cancer.1

One type of gene fusion is NTRK, which is present in a broad range of solid tumour types. NTRK gene fusions are tumour agnostic — meaning they are present in tumours irrespective of location in the body.2

There are emerging tumour-agnostic treatment approaches targeting these types of gene fusions.3

![FAST FACT]
Next-generation sequencing can identify genomic alterations across hundreds of genes known to drive cancer. This test can be used on any cancer, anywhere in the body.1

Next-generation sequencing allows us to understand the underlying genetic driver of a cancer, and this information can help doctors find a treatment for that patient specifically designed to target that genomic alteration.2 This is known as precision medicine.3 The hope is that matching targeted, tumour agnostic treatments to the genomic profile of a person’s cancer will improve outcomes.

![DID YOU KNOW?]
Treatments that target specific genomic alterations such as NTRK gene-fusions have the potential to improve outcomes for these patients, as traditional associated therapies (e.g. chemotherapy and radiotherapy) don’t distinguish between healthy cells and cancer cells.4

By matching the right treatment to the individual patient based on next-generation sequencing, precision medicine has the potential to transform the lives of cancer patients.

References