

The MOHCCN Patient Working Group Presents:

# ***Precision Oncology: From Hope to Impact***

A Pan-Canadian Patient Forum

## **Terms and Definitions**

1. **Marathon of Hope Cancer Centres Network (MOHCCN):** An initiative led by the Terry Fox Research Institute and the Terry Fox Foundation, uniting patients, researchers and clinicians from across the country, to accelerate the implementation of precision medicine for cancer in Canada.
2. **Precision oncology:** Personalized cancer treatment tailored to each person's individual genetic, molecular, and biological characteristics.
3. **Gold Cohort:** A national resource developed by the MOHCCN, containing the clinical and genomic data from over 16,000 cancer patients across Canada, aimed at unlocking data-driven discoveries and transforming how cancer is studied and treated.
4. **DNA** or deoxyribonucleic acid: The molecules inside our cells that contain the genetic information needed to determine the structure, function and behaviour of our cells. DNA contains genetic sequences or codes that are unique to each individual.
5. **Gene:** A basic heredity unit composed of a specific segment of the DNA that provides instructions for building proteins and determining specific traits of an individual.
6. **Genome** (genomic): The complete set of DNA found within a cell that contains the entire genetic code (and every gene) for an individual.
7. **Genetic mutation:** A change in the DNA sequence which can affect one or more of our genes and may alter the way a cell functions.
  - a) **Germline mutation:** Mutations inherited from our biological parents and therefore exist in every cell of our body. Some of these mutations could make us more susceptible to developing cancer.
  - b) **Somatic mutation:** Mutations that are acquired during our lifetime in some cells but are not inherited nor passed on. These errors may occur in any cell or tissue type. Mutations that alter the way a cell divides may cause cancer.
8. **Biomarkers** or biological markers: Any biological characteristic or trait, such as a protein or gene, that can be measured to indicate a person's health status or risk of disease.
9. **Genetic Biomarkers:** Specific DNA sequences that can help identify a person's susceptibility to disease. These can be genetic mutations, errors or other variations that can be screened for in a person's blood or tissue samples.
10. **Whole genome sequencing (WGS):** The comprehensive sequencing of the entire genome of an individual. This technique can be used to compare the DNA from an individual's tumour to the DNA in their own healthy tissue.

### **Sources:**

[MOHCCN](#) | [Canadian Cancer Society Glossary](#) | [NIH Dictionary of Cancer Terms](#) | [CCRAN Glossary of Terms](#)