

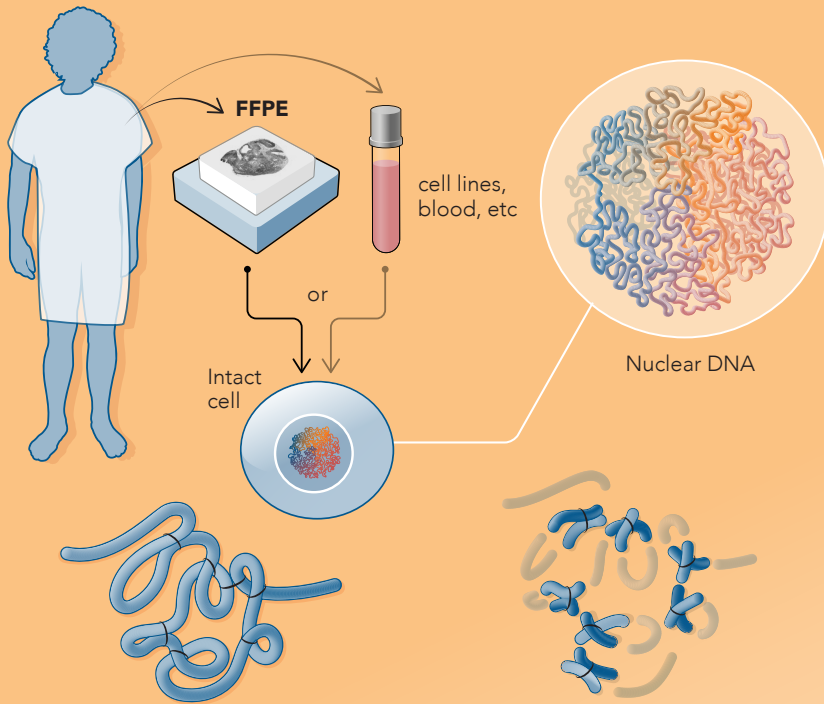


Access New Insights in Precision Oncology

The OncoTerra™ Oncology Platform leverages high-resolution genomic technology to expand the potential of precision oncology. It takes advantage of the unique strengths of ultra-long-range sequencing to unlock the wealth of diagnostic and prognostic information contained in FFPE samples, in a cost-effective and scalable NGS-based assay.

Key features and benefits:

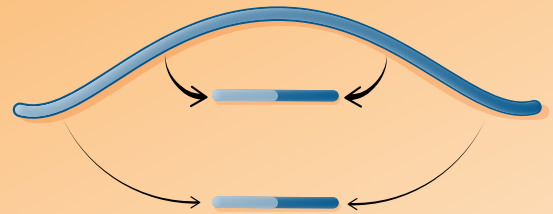
- Genome-wide detection of chromosomal abnormalities in a single, NGS-based assay
- Comprehensive cytogenomic information from FFPE samples
- Compatible with a wide variety of sample types without dedicated instrumentation
- New molecular technology with companion analytics



How it works

Chromatin is packaged into 3D structures that retain a relationship between genomic and physical distance (i.e. sequences that are closer on the same chromosome are also closer in physical space).

This method exploits the relationship between linkage and proximity to enable the reconstruction of chromosome structure.

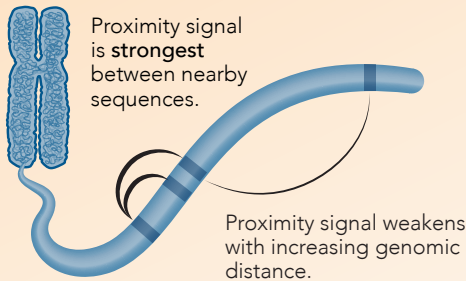


1 DNA is crosslinked *in vivo* to fix DNA sequences inside the nucleus. Crosslinking traps sequence interactions across the entire genome and between different chromosomes.

2 Crosslinked DNA junctions are fragmented, ligated, and converted into a sequencing library.

3 Junctions between physically linked loci are sequenced and mapped back to the reference genome. Each read represents a single, physical connection between two points on the genome. Collecting millions of these data points provides a statistical measure of the distance between any two positions along the genome.

Reconstructing the Genome



Measuring the physical proximity between all loci in the genome creates a genomic "map" unique to each sample, enabling the detection of a wide range of chromosomal abnormalities.

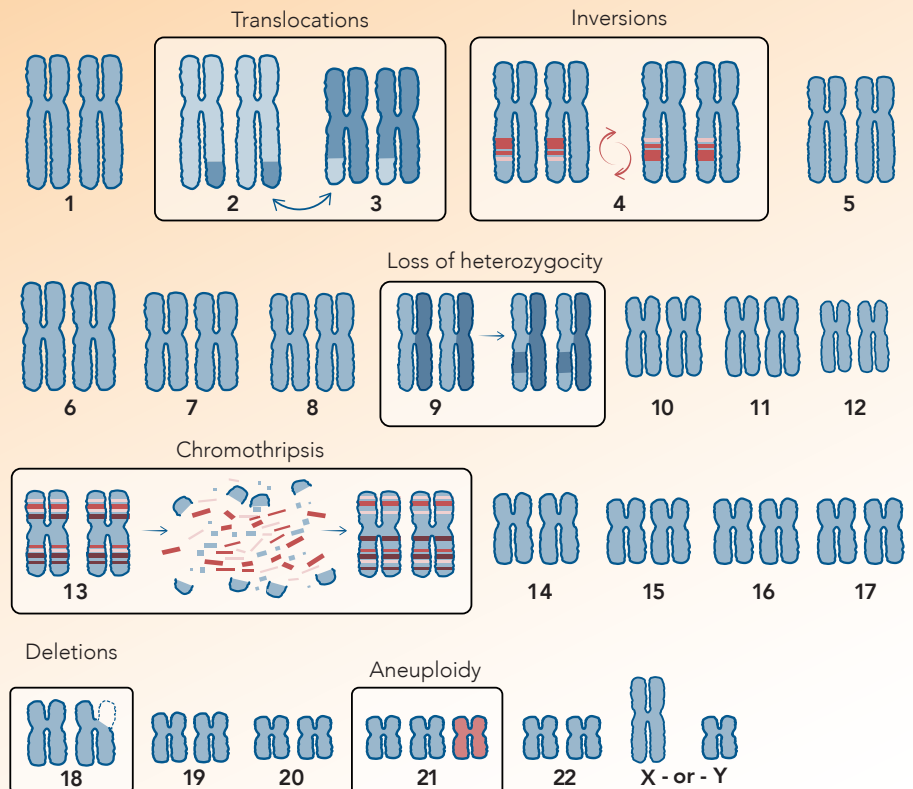


Illustration by Tolpa Studios

Single, Genome-wide NGS Assay

Powered by Phase Genomics' ultra-long-range sequencing technology, the OncoTerra™ Platform leverages the unique strengths of proximity ligation to characterize the breadth of chromosome abnormalities in a single assay.



Unlock the wealth of potential diagnostic and prognostic information contained within non-viable, FFPE, frozen, and fresh samples. Ultra-long-range sequencing does not require actively dividing cells or high molecular weight DNA extraction.



Reduce turnaround time and cost by characterizing the breadth of chromosome abnormalities in a single, scalable NGS-based assay.



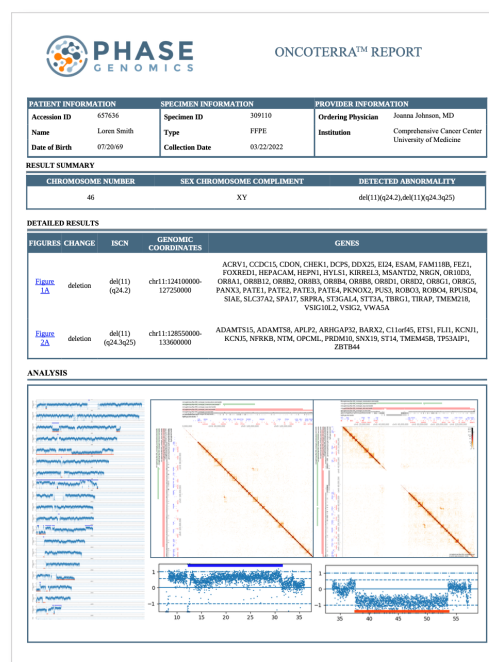
Simultaneously detect all major types of genomic rearrangements that cause and characterize disease, on a genome-wide scale.

Automated Analytics Yield Actionable Results

The OncoTerra Platform provides a sample-to-report NGS-based cytogenomics assay that starts with a solid tumor (e.g., FFPE) or hematological sample, and ends with a comprehensive and actionable report in standard ISCN and sequence-based nomenclature.

Fully automated, cloud-based analysis of paired-end Illumina® sequencing data is performed with Phase Genomics' proprietary computational tools.

The entire process can be completed in less than a week, and is scalable to large numbers of samples.





Phase Genomics has played a leading role in delivering ultra-long-range sequencing technology and computational tools to the life science research community, with a proven track record of enabling deeper insights into the architecture, variation, function, and complexity of genomes, epigenomes, and metagenomes. That same know-how and expertise has been used to create the OncoTerra™ Platform. This platform is our first offering that leverages ultra-long-range sequencing to deliver a cost-effective, high-throughput assay for uncovering potential genomic etiological underpinnings of human health and disease. Through the platform's impactful and actionable insights, we are enabling translational discoveries that will ultimately lead to faster precision diagnoses, treatment, and improved health outcomes.



The OncoTerra Platform is currently offered as a comprehensive sample-to-report service. Contact us to inquire about RUO kits compatible with existing low- and high-throughput sample processing pipelines.

[Learn more](#)



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