

Elevate the OGM Sample-to-Report Workflow with the Stratys™ System



Consolidate multiple
cytogenetic workflows
into one



Detect structural variants
genome-wide



Reveal pathogenic
variants at scale

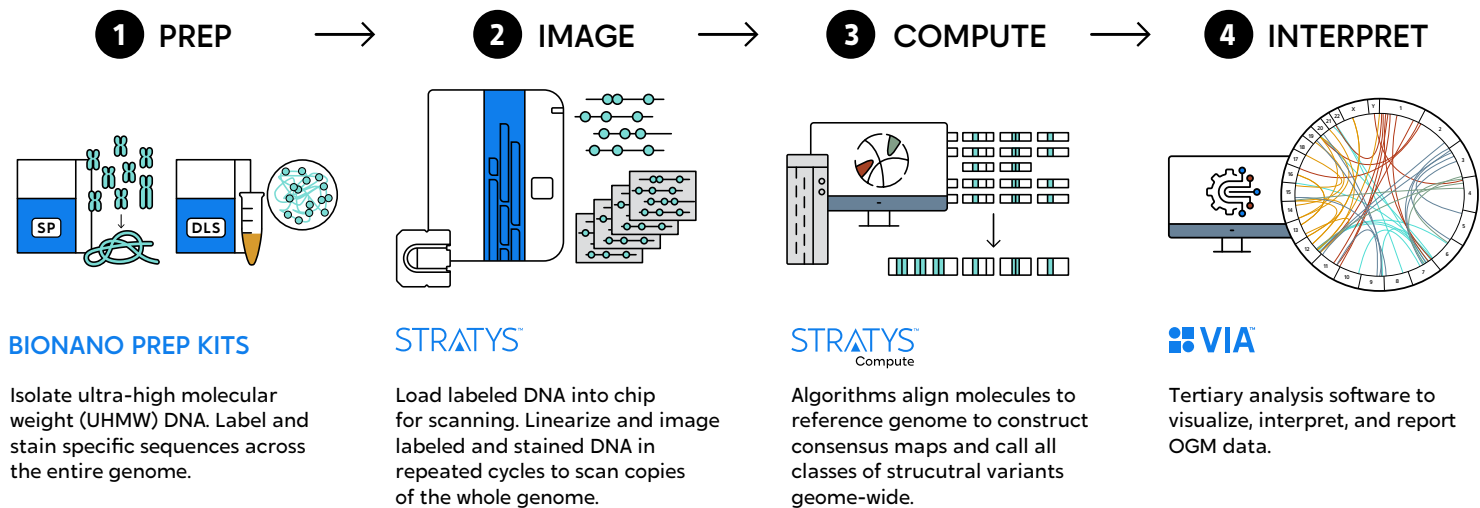


Reach a New Level of Workflow Speed and Simplicity

Reveal all classes of structural variants and leave the limits of traditional cytogenetics and sequencing behind with Optical Genome Mapping (OGM) and the Bionano Stratys™ System.



The OGM Workflow



Superior Structural Variant Detection

OGM delivers high-resolution detection and automated analysis of all structural variant classes genome-wide.

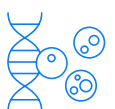
- ✓ Aneusomies
- ✓ Interstitial Variants
 - Insertion
 - Deletion
 - Duplications
 - Inversion
 - Copy Number Variants
- ✓ Translocations
- ✓ Copy Neutral Loss of Heterozygosity
- ✓ Complex Rearrangements
 - Ring Chromosome
 - Chromothripsis
 - Chromoplexy

Detect SVs starting at **500 bp**

VAF of **5%** or lower*

Automated **VARIANT CALLING**

Reveal New Insights Across Applications



Rise to the Challenge of Comprehensive SV Detection at Scale

Scalable throughput and unprecedented flexibility empower you to uncover critical insights and make a transformative impact on human health.



High Sample Capacity

The Stratys instrument provides capacity for 12 single-sample, random-access chips. Load and unload chips as they complete—no need to wait for another sample to finish.



Ultimate Flexibility

No batching required. Optimize cost and efficiency in your lab based on level of demand, loading from one to 12 samples in any run.



"Jump the Queue" for Priority Samples

With reserved space for three samples so you can perform on-demand runs without disrupting the analysis of other samples on the system.



Reduced Turnaround Time

The Stratys system's simplified workflow and scalable sample capacity enables you to deliver results faster while managing lab resources more effectively.

Stratys Performance				
Target Effective Coverage ¹	100x	200x	400x	1200x ²
Expected VAF for SV Detection	≥ 50%	≥ 20%	≥ 5%	lower than 5% ⁴
Stratys Throughput Per Week ³ /Samples	24/7 operation: 260 40 hour operation: 120	24/7 operation: 168 40 hour operation: 60	24/7 operation: 96 40 hour operation: 60	24/7 operation: 30 40 hour operation: 24
Imaging Time (One batch of 12 chips)	6 – 10 hours	12 – 16 hours	18 – 22 hours	60 – 70 hours

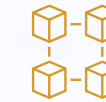
1. Target Effective Coverage based on 80% map rate.
 2. Requires Stratys Plus Chip, VAF: Variant Allele Fraction.
 3. Maximum throughput on one Stratys system; assuming that enough samples are available to run at 100% capacity. Typical performance based on various human control samples run at Bionano.
 4. Refer to LIT-00017 Redefining Cell Characterization and QC for Genomic Integrity and Off-Target Monitoring and ask your Bionano contact for more details.

Optimized Reagents and Consumables for Your Applications

Choose the most efficient path to results with application-specific sample preparation kits and chips for the Stratys system.



BIONANO SAMPLE PREPARATION KITS



Application-specific kits optimized for Stratys chips.



Compatible with a wide range of sample types:
 Fresh and Frozen: Cell Lines, Blood, Bone Marrow Aspirates, Tissue and Tumor

STRATYS CHIPS



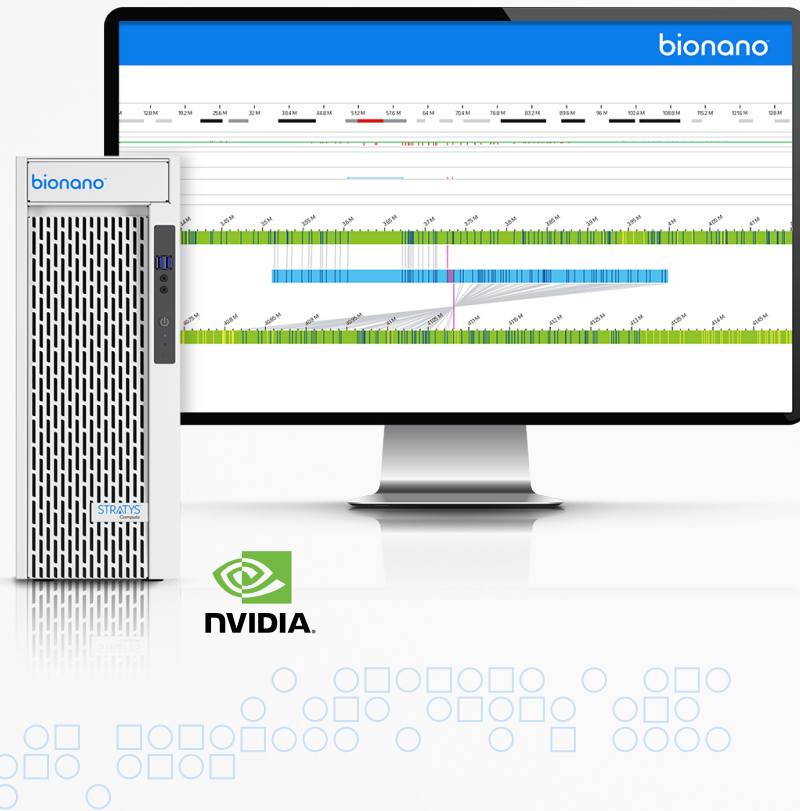
Stratys chips provide a nanofluidic environment in which DNA molecules linearize across hundreds of thousands of nanochannels where they can be imaged to reveal the underlying genomic structure and structural variation.

STRATYS CHIP TYPES AND APPLICATIONS

		Stratys Core Chip			Stratys Plus Chip			
Target Effective Coverage		100x	200x	400x	100x	200x	400x	1200x
Recommended Applications								
FSHD		●			●			
Genetic Disease	Prenatal		●			●		
	Postnatal		●			●		
	RUGD		●			●		
Oncology	Hematological Malignancies			●			●	●
	Solid Tumors			●			●	●
Cell and Gene Therapies	Stem Cells			●			●	
	iPSCs			●			●	
	T-cell and Primary Cell			●			●	●

Stay in the Flow with Streamlined Data Processing

The Stratys Compute high performance workstation and Bionano software provide the throughput to keep your workflow moving at the speed of scale.



STRATYS COMPUTE HIGH PERFORMANCE WORKSTATION



Data Processing Powerhouse

Stratys Compute powered by NVIDIA RTX GPUs delivers significantly faster runtimes and lower compute costs. Cutting-edge technology powers acceleration achieved through software releases.



Best Sensitivity for OGM

With the latest informatics pipeline for OGM data, Stratys Compute offers the best sensitivity for genome wide detection of all classes of SVs using OGM.



Supports a Constant Flow of Data

Stratys Compute's advanced technology and intelligent processing allow a continuous flow of data from the Stratys instrument for optimal workflow scalability.

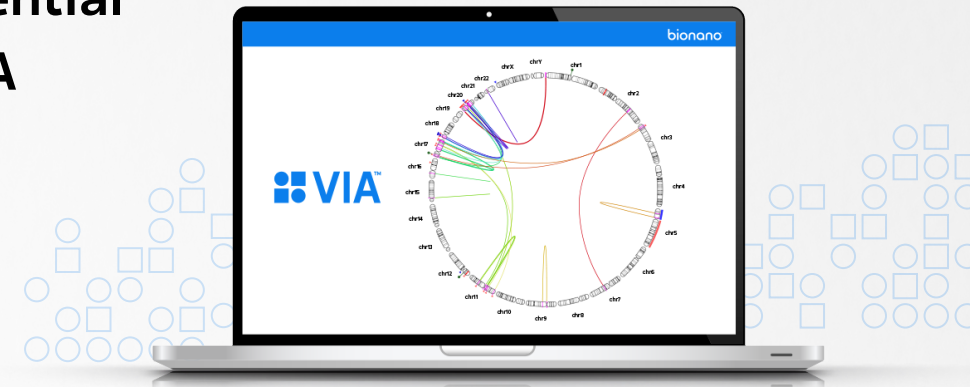


Minimal IT Resources Required

The Stratys Compute workstation is installed alongside the Stratys instrument and does not require installation in a data center, reducing IT burden and implementation time.

Harness the Full Potential of Your Data with VIA

Variant Intelligence Applications™ (VIA) software empowers your lab to deliver meaningful insights from across technologies—no bioinformatician required.



BIONANO VIA™ SOFTWARE



Visualize

Generate powerful visualizations for enhanced contextualization across multiple variant types.



Interpret

Accelerate time to results with intelligent automation for filtering, classifying, annotating and interpreting data across technologies.



Report

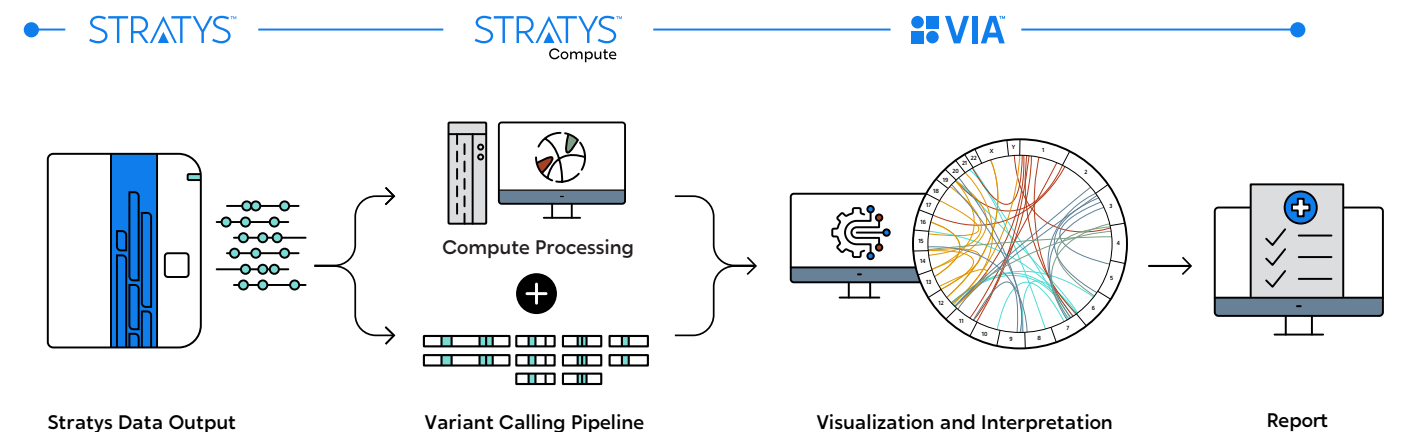
Deliver clear, highly visual reports that support informed decision-making.



Integrate

View and fully analyze data from OGM, NGS and microarray in one system for a simplified and integrated workflow.

OGM DATA FLOW



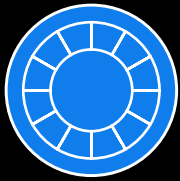
Structural Variation Detection at Scale with Stratys



Detect SVs
starting at
500 bp



VAF of
5%
or lower*



Scalable throughput
with capacity for
12 Samples
simultaneously



Up to
1200x
target effective
coverage

*Lower VAF percentages can be achieved when using the Stratys Plus Chip, which enables up to 1200x target effective coverage.

Move Forward with Bionano



OPTICAL GENOME
MAPPING



NUCLEIC ACID
PURIFICATION



ANALYSIS
SOFTWARE

 STRATYSPHERE



Easy to Implement.
Minimal Training Required.
Get Started with Stratys Today.



orders@bionano.com



1.858.888.7600



Learn more at bionano.com/Stratys-Systems

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