strand

Strand RDRH Portfolio

Comprehensive Genomic Solutions

CAP ACCREDITED
COLLEGE of AMERICAN PATHOLOGISTS
#875094101

MC-2434

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About Strand Life Sciences

Strand Life Sciences, a subsidiary of Reliance Industries Limited, is a genomics-based research and diagnostics company that combines a long track record in bioinformatics with cutting-edge laboratory assays and a vast hospital partner network to drive newer generations of patient care.

Strand's customers include global instrument, diagnostic and pharmaceutical companies. Strand is also a pioneer of genomic testing in India and its long global bioinformatics track record makes it the most trusted company for genomic diagnostics in the areas of oncology, rare diseases, women's health, and infectious diseases.

24+ Years of Innovation

80K+ Genetic Tests Reported

500 Employees

500+ Projects Executed for Genomics Majors Globally

450+ **Strong Network:** Oncologists, Geneticists, Hospitals & Research Institutes

Presence in 20+ Countries

INDIA, USA, UK, FRANCE, SWITZERLAND, GERMANY, AUSTRIA, SINGAPORE, AUSTRALIA, JAPAN, BANGLADESH, UAE, ASEAN

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Comprehensive Genomic Testing for all Stages of Life

Preconceptional Screening
- Couple Carrier
- Infertility Screening
- PGT-A

Prenatal Testing
- ExomePlus (WES)
- CNSeq (Low-pass WGS)
- AneuXpress (QF-PCR)
- MaatriSeq (NIPS)

Postnatal Testing
- Newborn Testing
- Pediatric Testing

Adult Testing
- Inherited panels
- Gene panels

Proactive Screening
- Carrier Screening
- Inherited Cancer Screening

Strand Proprietary Platforms

strandomics strandngs

POWERED BY

illumina NovaSeq™ X Plus

World's Highest throughput Sequencer

ExomePlus

ExomePlus is an advanced genetic test, that goes beyond traditional Whole Exome Sequencing technique.

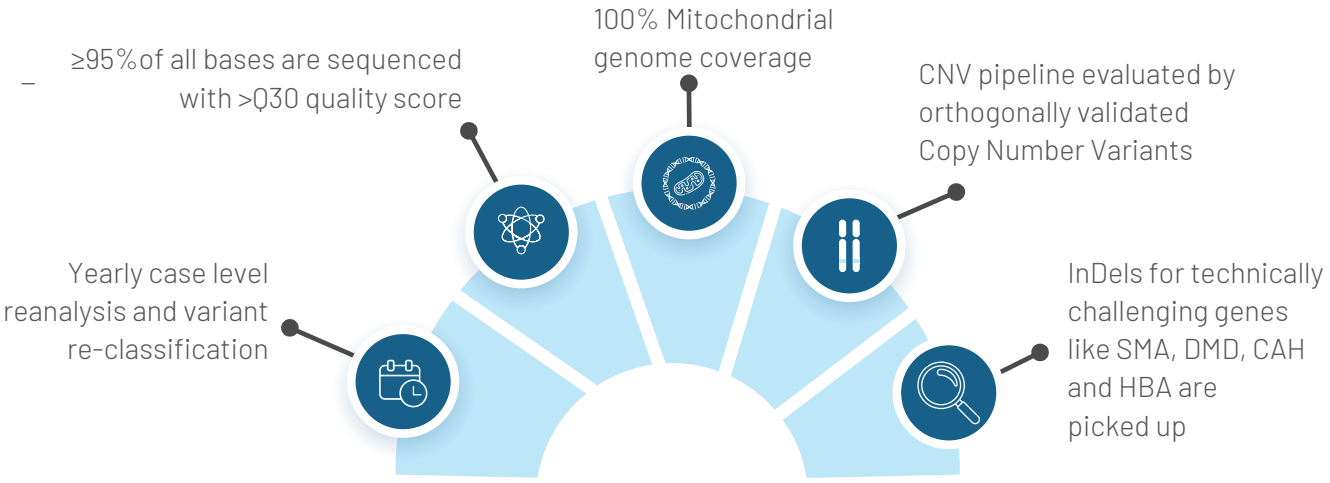
This comprehensive approach empowers clinicians to offer more precise diagnoses, prognostic insights, and targeted treatment options, giving them a competitive edge.

Unique Features

100-150X
Average Read Depth

>1 Single exon
Deletions/Duplications detected

Advanced
UPD pick-up



Turnaround Time
21 Days

Sample Requirement
Blood/Saliva/Cheek Swab/Genomic DNA/Dry Blood Spot

CNSeq: Low-pass Whole Genome Sequencing

CNSeq revolutionizes chromosomal analysis. Leveraging NGS technology, it detects Copy Number Variants (CNVs) with unmatched accuracy compared to traditional cytogenetic methods.

The key to CNSeq's power lies in its strategic use of low-pass whole genome sequencing, reading each base a few times. This focuses on identifying large-scale CNVs uniformly across the genome for faster analysis and potentially deeper insights into chromosomal abnormalities.

It empowers clinicians with the ability to explore insights in detail, enabling a comprehensive grasp of structural variations in the genome with unbiased CNV calling across the genome.

CNSeq

CNSeqHD

Key Features

- Increased CNV callers for improved detection reliability
- Validated for both prenatal & pediatric settings
- Advanced pipeline adjusts for maternal cell contamination in calculating mosaicism and aneuploidies

Turnaround Time
21 Days

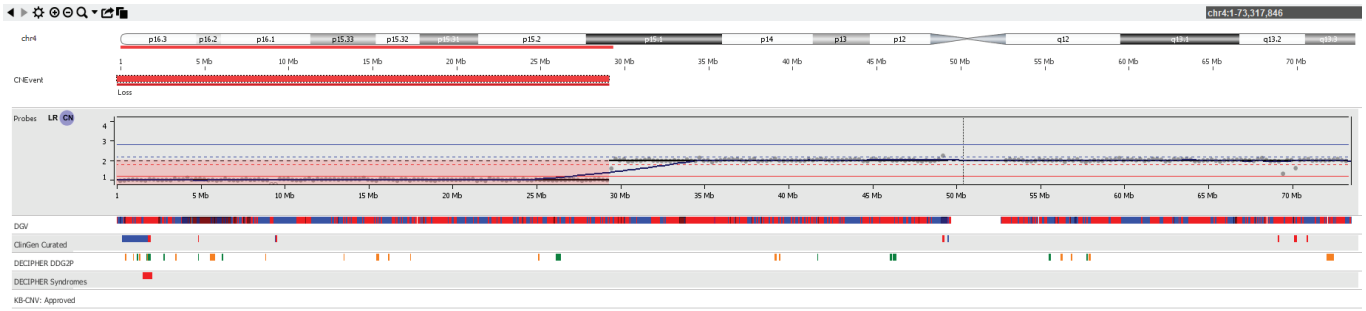
Sample Requirement
Amniotic Fluid, CVS, POC, PVB & gDNA

Going beyond traditional array with CNSeq

Technique	Karyotype	Prenatal CMA	750K	CNSeq	CNSeqHD
Coverage	>5Mb	Probe-based	Probe-based	Complete genome coverage	Complete genome coverage
Resolution	>5Mb	>500Kb	>100Kb	500Kb	>50Kb
DNA quantity requirement	Cell Based	250 ng	250 ng	50 ng	50 ng
Low-level Moscaism sensitivity	10%	>20%	>20%	>20%	>20%
Abnormalities detected	Aneuploidies, larger CNVs, Structural Abnormalities, Balanced Translocation	Aneuploidies, CNVs, UPDs, Polyploidy, AOH/LOH	Aneuploidies, CNVs, UPDs, Polyploidy, AOH	All Aneuploidies, CNVs & Structural Variants	All Aneuploidies, CNVs & Structural Variants

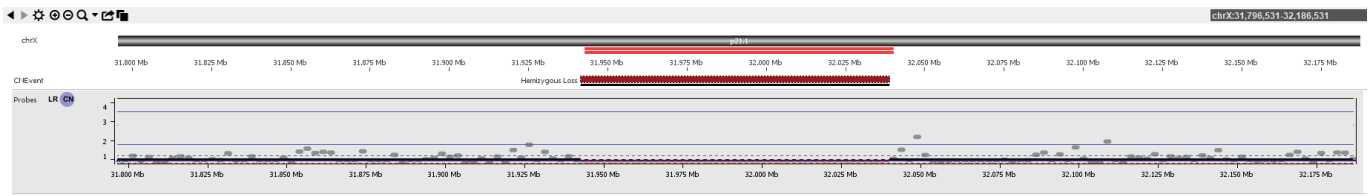
Unique CNVs picked up by CNSeq

Wolf-Hirschhorn Syndrome - Pathogenic loss



Unique CNVs picked up by CNSeqHD

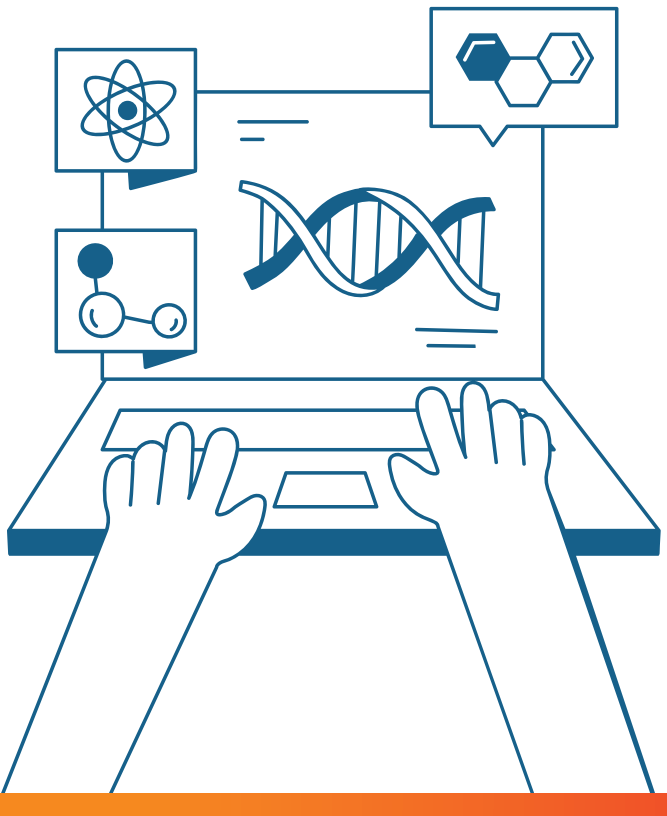
Congenital Heart Defect - **10kb Deletion** Pathogenic Copy Number Loss



CNSeq & CNSeqHD: Validation Data

	Detected Events – CNVs & Aneuploidies (bp)							
Coriell Controls	10 - 100K	100 - 250K	250 - 500K	500K - 1M	1M - 5M	5M - 30M	>30M	Whole Chr
CNSeq								
NA50324				▣		● ▲		
NA21699				●		▲	●	
NA04375						▲		
NA04409				▲		●		
NA03623							● ●	
NA11385					▲			
CNSeqHD								
NA21886		● ● ● ▲		▲		▲		
NA04409			●	▲		●		
NA12878		▲ ▲ ▲ ▲ ▲ ▲						
PCE-2	▲							
PCE-3	●							
NA21699		▲		●		▲		■

● Gain; ■ Mosaic Gain; ▲ Loss; ◆ Polymorphic event undetected; ▣ Borderline gain event undetected



MaatriSeq: Precision Prenatal Care

A cell-free DNA (cfDNA) based screening test designed to provide expectant mothers with early insights into their baby's health.

- Analyses fragments of the baby's DNA circulating in mother's blood
- Performed as early as 10 weeks of pregnancy
- Non-invasive, with a simple blood draw, offers little risk to the mother or fetus
- Comprehensive insights within 10 days

NGS based NIPS powered by illumina's NovaSeq™ X Plus

MaatriSeq screens for

- Down Syndrome (Trisomy 21)
- Edwards Syndrome (Trisomy 18)
- Patau Syndrome (Trisomy 13)
- Gonosomal Aneuploidies (X&Y)
- All Chromosomal Aneuploidies (22 pairs)

Turnaround Time
12 Days

Sample Requirement
10ml Maternal Blood

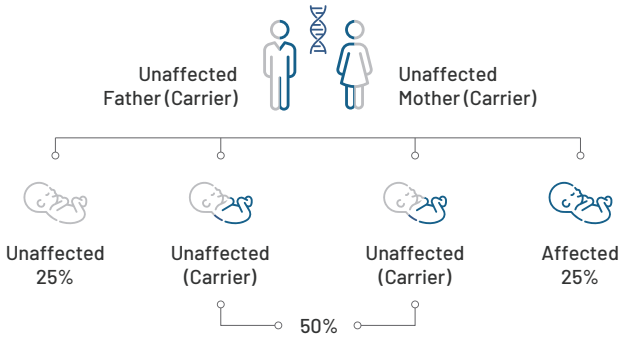
Disclaimer: This test is exclusively available upon prescription by a certified clinician/clinical geneticist duly registered with PCPNDT guidelines.

Carrier Screening

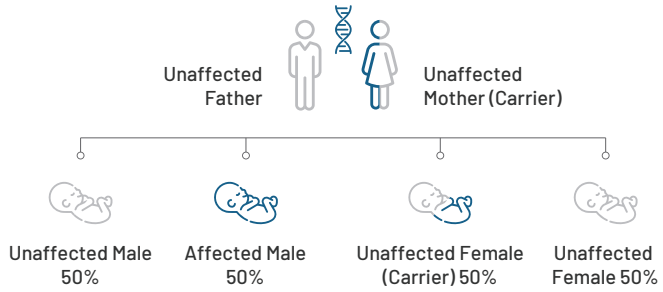
Carrier Screening is a critical component of preconceptional and prenatal care that helps to identify individuals who might be carriers for genetic disorders and empower them with informed reproductive decisions.

Strand offers advanced Carrier screening to effectively identify a wide range of Autosomal Recessive, X-linked Recessive, & some Autosomal Dominant genetic disorders.

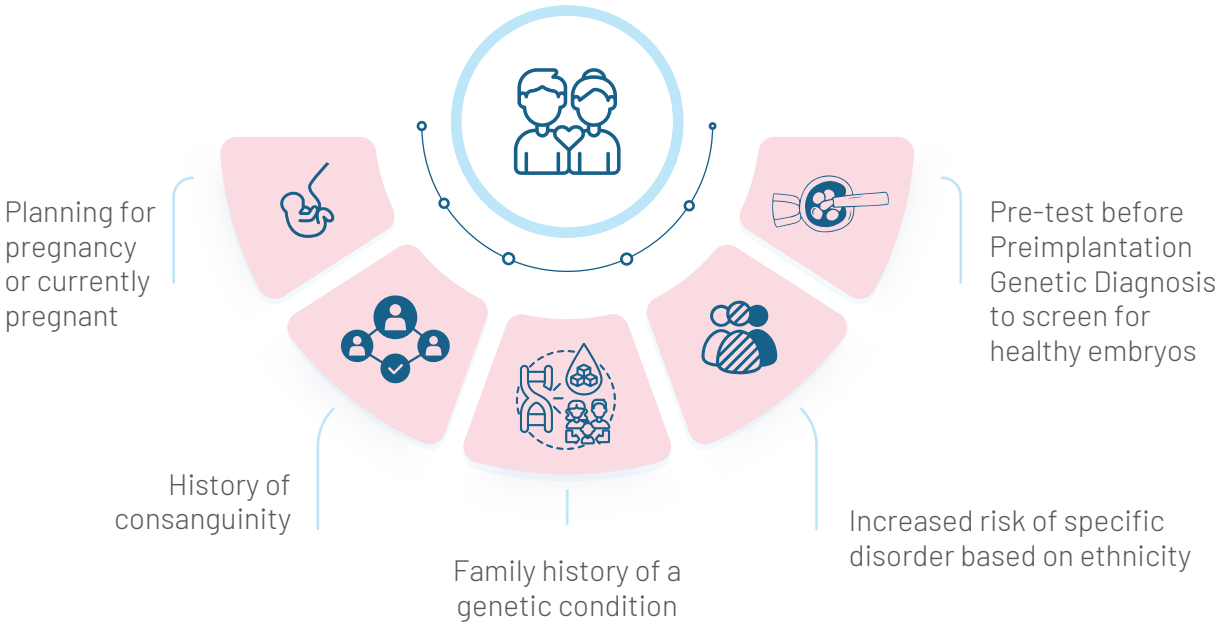
Autosomal Recessive Conditions



X-linked Recessive Conditions



Carrier Screening can be offered to Couples:



Turnaround Time
21 Days

Sample Requirement
Amniotic Fluid, CVS, POC, PVB & gDNA

Strand Comprehensive Carrier Screening detects disease-causing mutations in ~2000 Genes recommended by the ACOG

- Inborn Errors of Metabolism
- Cardiac Disorders
- Skeletal Disorders
- Congenital Malformations
- Neurodevelopmental Disorders
- Connective Tissue Disorders
- Developmental Delay
- Endocrine Disorders
- Neuromuscular Disorders
- Blood Related Disorders

Why Choose Strand Carrier Screening?

Analyzes ~2000 genes associated with disease-causing mutations in the entire coding region with ≥99% of targeted genes covered at ≥20X sequenced by Next Generation Sequencing

Integrated reporting pipeline for detection of CNVs and InDels

Additional MLPA analysis is done for conditions such as Duchenne Muscular Dystrophy (DMD), Spinal Muscular Atrophy (SMN1), and Congenital Adrenal Hyperplasia (CYP21A2)

Annual case level reanalysis and variant reclassification enabled by proprietary StrandOmics platform

AneuXpress: Quantitative Fluorescent PCR

AneuXpress is a DNA-based Quantitative Fluorescent Polymerase Chain Reaction (QF-PCR) method that has emerged as a breakthrough technique for rapid detection of common aneuploidies.

Coverage

- Chromosome 21: Down Syndrome
- Chromosome 18: Edwards Syndrome
- Chromosome 13: Patau Syndrome
- Anomalies of the Sex Chromosomes (XXY, XXX)

Advantages of QF-PCR

- Rapid Testing TAT - 48 Hrs
- DNA based Testing
- Picks up Maternal Cell Contamination
- Minimal Sample Requirement
- Low chances of false Positives/Negatives
- Cost Effective
- Automated and Efficient
- Informed Reproductive Decisions

Turnaround Time
48 Hrs

Sample Requirement
Blood/CVS/Amniotic fluid/ Fetal Blood/POC

Recommended
Prenatal

PGT-Aneuploidy

Preimplantation Genetic Testing (PGT-A) is an NGS-based technology to accurately screen for chromosomal aneuploidies and copy number abnormalities in embryos.

PGT-A enables you to choose the healthiest embryo for transfer, increasing your chances of achieving a successful pregnancy and reduces the risks associated with multiple pregnancies.

Unique Features

Comprehensive Genetic Insights: Evaluates all 24 chromosomes for better embryo screening

Mosaicism Detection: Enables precise determination of each embryo's genetic profile

High Precision, High Confidence: NGS-based screening for reliable results & well-informed decisions

illumina NovaSeq™ X Plus: Most advanced high throughput NGS platform

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Turnaround Time
21 Days

Sample Requirement
Trophectoderm (Day 5) Biopsy

State-of-the-Art Genetic Diagnostics Laboratory

Strand Lab is at the forefront of innovation, offering a wide range of automated workflows, multi-omics platforms, advanced technology, curated datasets, and partner services to meet your diverse testing needs. Our commitment to excellence is reflected in our state-of-the-art equipment, proprietary software, and deep expertise in multi-omics applications.

Automated Workflows

- High Throughput Lab automation platforms
- Automated Clinical Reporting Solutions (StrandIris)

Multi-Omics Platforms

- Flexible, scalable testing capabilities
- Proprietary softwares (StrandNGS & StrandOmics)
- Custom solutions and assays across Genomics, Transcriptomics & Metagenomics

Advanced Technology

- State-of-the-art sequencing with Illumina NovaSeq™ X Plus
- Digital Pathology for Advanced Diagnostics
- Expertise in Spatial Transcriptomics

Curated Datasets

- 80,000+ validated clinical patient datasets
- Strong Somatic Knowledgebase of 524 genes, comprising of 20,000 variants, 100+ FDA approved drugs & 4844 pathway interactions
- Clinical Trials, Biomarkers & Drug Discovery support

Partner Services

- Strategic Partnerships - Life Sciences, Biotech & Pharma
- Assay Development, Testing, Validation and Collaborative Research

Analytical Expertise

- Deep expertise in multi-omics applications with >30 PhDs and 120 Masters professionals
- 80+ Publications and 20,000+ citations for tools developed by Strand

24+ YEARS OF EXPERIENCE

80,000+ Genetic Tests Reported

500+ Projects Executed for Genomics Majors Globally

Presence in **20+** Countries

SCAN TO KNOW MORE

Reference Medical Laboratories

CHANNEL PARTNER

strand

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