NM MEDICAL

Molecular Diagnostics

PRO GENOME

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The future is here

To change our future, we must know it.

Let's evolve from preventive
to predictive diagnosis
From generalized to
personalized treatment

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NM MEDICAL unveils a new world-class genetic lab in **Marine Lines**

The World of **ProGenome®**

Genetic disorders can impact your health today or in the future. Precisely why, NM Medical brings you its exclusive Genetic Testing facility with Next Generation Sequencing (NGS) to identify underlying genetic cause of any suspected disease. It helps you predict disease at an early stage and understand appropriate personalized treatment options.

ProGenome® brings a plethora of genetic tests across various health segments, under one roof

- Oncology
- Reproductive Health
- Wellness
- Inherited Diseases

ProGenome® - fully automated lab, including Genomics at Marine Lines, Mumbai

Trusted
Most-trusted and recommended genetic lab

One stop solution
Comprehensive range of offerings

Expert Guardians
Expert genetic counsellors who help you choose the right test and interpret results

Accurate and reliable
World-class equipment and test protocols that eliminate human error

Most economical
Appropriate test selection that's cost-efficient

Welcome to

THE WORLD OF PROGENOME

ProGenome® offers you plethora of genetic tests across various health segments, all under one roof.


ONCOLOGY


NEUROLOGY


CARDIOLOGY


OTHER DISORDERS


PHARMACOGENOMICS


REPRODUCTIVE HEALTH


WELLNESS

Oncology

Gene testing may serve as an opportunity for patients and family members to learn about their own cancer risks, how to manage such risks, and also help in making decisions about their treatment.

ProGenome® Clinical / Whole Exome

ProGenome® Onco Focus
ProGenome® Comprehensive

ProGenome® Breast Cancer - *BRCA I & II*

ProGenome® Cancer Hotspot

ProGenome® Immuno-Onco Biomarker Assay

ProGenome® Actionable Markers for Solid Tumors

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why delay?

Prevent the risk of cancer.
Get yourself tested today.

ProGenome® brings you an opportunity
to predict cancer before it progresses.

Introducing BRCA Gene testing by NGS to help you make informed decisions on risk reduction strategies for breast and ovarian cancer and to tailor targeted treatment options.

What is ProGenome® BRCA Gene Test?

ProGenome® BRCA Gene Test is a simple blood test that uses DNA analysis to identify harmful changes (mutations) in either of the two tumour suppressor genes — **BRCA1 and BRCA2, creating significantly higher cancer risk particularly in the breast and ovaries.**

Who should opt for ProGenome® BRCA Gene Test?

- Personal history of breast or ovarian cancer diagnosed at young age (premenopausal)
- Family history of breast, ovarian, fallopian tube, peritoneal, prostate, or pancreatic cancer
- A relative with a known deleterious mutation in BRCA1 or BRCA2 genes
- Two or more relatives with ovarian cancer

What happens if a BRCA 1 or 2 Mutation is detected?

- A positive result doesn't mean you are certain to develop cancer
- You should meet a clinician to proactively manage your risk
- If you're already diagnosed with breast cancer the test will help guide treatment decisions

What makes ProGenome® BRCA Gene Test special?

- Uniform coverage across all coding exons and splice sites
- Efficient sequencing and accurate analysis for mutation hotpots and other mutations in exonic regions
- Detects SNVs, InDels, and large exon/gene deletions/duplications
- Screening from blood (Germline mutation screening) or from FFP block (Somatic testing)

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In Oncology, accuracy matters.

Bringing you

PRECISION OncoGenomics

A new-age genetic analysis of cancer tissue for personalized and efficient **Cancer Management**
Faster | More Sensitive | Cost-effective

ONCO HOTSPOT PANEL TESTING

It interrogates **multiple Genes with NGS** to help you make informed decisions on therapeutic strategies for multiple cancers and offer patients tailor-made treatment options.

What is ProGenome® Onco Hotspot Test?

- Specialized tissue-based test that surveys hotspot regions of **50 oncogenes / tumor suppressor genes**, that are associated with current Oncology drugs and treatment protocols of multiple cancers.

Who should opt for ProGenome® Onco Hotspot Test?

- Patients with advanced (Stages 2,3 and 4: metastatic cancers) colorectal & lung carcinoma and melanoma
- Patients with rare type of cancers
- Prior to starting new generation drugs to treat cancer patients having poor response to initial treatment

What makes ProGenome® Onco Hotspot Test special?

- Wider coverage to detect clinically actionable genetic alterations in patients with advanced solid tumor cancer
  - Identify *BRAF* variants & specific *EGFR* variants
  - *KRAS, BRAF, PIK3CA,* and *AKT* mutant versus wild type reporting (as clinically indicated)
  - Identify any other clinically-relevant variants in the remaining genes
- Requires very less sample (10ng of DNA), from cytology specimen (like fine needle aspirates) or formalin-fixed paraffin-embedded biopsy tissue.
- Enables personalized therapeutic option with access to conventional therapy and clinical trial of new drugs.
- Helps to optimize cost, time, sensitivity & efficiency

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Breathe a sigh of relief with Lung-cf Assay.

Bringing you
accuracy and new possibilities with

PRECISION OncoGenomics

ProGenome's Lung-cf Assay covers more than **220 variations in 12 genes related to various lung cancers.** This assay detects lung tumor-derived cell-free DNA and RNA (cell-free total nucleic acid - cfTNA) isolated from the plasma fraction of whole blood. It expands treatment options, along with providing therapy monitoring and management solutions

Genes covered: *ALK, MET, BRAF, NRAS, EGFR, PIK3CA, ERBB2, RET, KRAS, ROS1, MAP2K1* and *TP53*

Why oncologists and pathologists choose Lung-cf assay?

- Liquid biopsies offer several advantages over conventional solid tumor samples:
- More number of genes screened for variety of variants like SNVs, indels, CNV, fusions and exon skipping.
- Less invasive to obtain, enabling tumor content to be sampled multiple times
- Faster turnaround time from sample to results
- Help to snapshot more of the tumor heterogeneity
- Efficient workflow, from a 1-2 tubes of blood to results
- Very high sensitivity and specificity, enabling extremely low levels of detection with minimal false positives
- **Multiple genes tested at time**
  - Accurate sample representation
  - Compatible with FFPE samples for possible concordance studies
  - Cost effective as compared to individual gene testing

To add most common assays

Neurology

Certain neurological conditions occur when genetic variants are passed down in families through genes.
If you or a family member are diagnosed or are suspected to have a neurological condition like movement disorders, muscular dystrophy, neurodegenerative disorders

- **ProGenome®** Dementia Screen
- **ProGenome®** Neurosearch panel (NGS)
- **ProGenome®** Epilepsy panel
- **ProGenome®** Ataxia panel
- **ProGenome®** Dystonia panel
- **ProGenome®** Charcot-Marie-Tooth Neuropathy panel

Cardiology

Certain heart disease can occur when one inherits genetic variants associated with that disease. This can affect family members too. At ProGenome we offer a series of tests and panels for inherited risk and response to treatment drugs.

You should consider testing if you or a family member have a congenital cardiac condition, cardiomyopathy, high cholesterol or triglyceride values, pulmonary hypertension, sudden cardiac event and/or arrythmia.

- **ProGenome®** Hyperlipidemia panel
- **ProGenome®** Noonan syndrome panel
- **ProGenome®** Marfan panel
- **ProGenome®** Arrythmia panel
- **ProGenome®** Cardiomyopathy panel
- **ProGenome®** Thrombophilia Panel

Other Disorders

We also offer tests and panels for a variety of other conditions including rare disorders and paediatric conditions.

- **ProGenome®** Hemachromatosis Screen
- **ProGenome®** Celiac Disease & Gluten Sensitivity Screen
- **ProGenome®** Metabolic Profiling (NGS)
- **ProGenome®** Gilbert Syndrome Screen
- **ProGenome®** Clinical / Whole Exome (NGS)
- **ProGenome®** Gut Microbiome (NGS)

Pharmacogenomics

Pharmacogenomics is the study of how genes affect a person's response to drugs. Testing should be considered to develop effective, safe medications and prevent side effects. Medicine dose can be tailored to a person's genetic makeup.

- Warfarin
- Statins
- Thiopurine and Methotrexate
- Clopidogrel
- Hypertension

Reproductive Health

Innovations in genomic medicine offers now brings you new opportunities in reproductive health. Genetic techniques are faster, more efficient, more flexible and provides better understanding of infertility and genetic diseases.

Noninvasive prenatal screening (NIPS/NIPT)

Preimplantation genetic diagnosis (PGD)

Preimplantation genetic testing (PGT/PGS)

Carrier screening

IVF response check

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The future of a baby can be ensured inside the womb.

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Bringing you

Noninvasive Prenatal Screening

(NIPS / NIPT)

to help you detect various chromosomal abnormalities.

NIPS/NIPT is a simple blood test that analyzes cell-free DNA (cfDNA) circulating in the maternal blood, in order to detect chromosomal abnormalities like:

- **Down syndrome** (trisomy of chromosome 21)
- **Edwards syndrome** (trisomy of chromosome 18)
- **Patau syndrome** (trisomy of chromosome 13)
- **Turner syndrome** (having only one sex chromosome, an X)
- **Klinefelter syndrome** (having three sex chromosomes, two Xs and a Y)

At ProGenome, we are driven to go beyond the traditional screening tests for chromosome conditions, such as ultrasound and other outdated blood tests. **NIPS / NIPT is more accurate and can be opted in the 1st trimester itself, significantly reducing the need for invasive testing like amniocentesis or chorionic villus sample during early developmental stages where risk of miscarriage is high.**

Microdeletions testing can be offered along with NIPS test at ProGenome, to put forth more comprehensive assessment.

Reason why, we at ProGenome, encourage all pregnant women to opt for this revolutionary test to rule out any chromosomal abnormalities in the unborn child.

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From IVF to pregnancy, with

PREIMPLANTATION GENETIC SCREENING.

The goal of preimplantation genetic screening is to ensure that embryos with the highest chance of achieving a healthy pregnancy and child are used during IVF.

Indications FOR PGS can be opted when:

- **Advanced maternal age** = The risk of chromosomal abnormalities, such as Down Syndrome, in embryos increases with the age of the mother
- **Recurrent miscarriage** = Approximately 50% of miscarriages occur due to chromosomal abnormalities. In the case of miscarriages, 68% of embryos are chromosomally abnormal. Embryos that are chromosomally normal are more likely to result in live birth.
- **Chromosome abnormalities** = While a few chromosomal abnormalities are compatible with life, these babies may be born with birth defects and cognitive impairment. PGS screening detects major chromosome abnormalities allowing informed decisions about reproductive care.
- **Implantation failure** = Some chromosomal abnormalities impair the embryo's ability to implant into the uterus. Embryos that are chromosomally normal have a better chance of successful implantation.
- **Male factor infertility** = Male factor infertility (including abnormal quantity and quality of sperm) can increase the risk of chromosomal abnormalities in the embryo. PGS can aid in identifying chromosomally normal embryos

Preimplantation genetic diagnosis (PGD)

PGD is a test that can prevent the transmission of single gene disorders. Preimplantation genetic diagnosis (PGD) tests an embryo for a single, specific genetic disorder either parent may carry or be suspected of carrying, such as Huntington's disease or cystic fibrosis.

PGD test can be opted when:

Individuals and couples who are known carriers of a specific genetic disorder or have a family history of one. They have an increased risk of having a child with that genetic disorder.

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Multiplex Real Time
PCR panel for a faster, more
sensitive and cost-effective
INFECTION IDENTIFICATION AND MANAGEMENT

ProGenome®
Infectious Disease

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Multiplex Real Time PCR panel for a faster, more sensitive and cost-effective
INFECTION IDENTIFICATION AND MANAGEMENT

ProGenome®
Respira-Stat

Detects 22 respiratory targets including 2019-nCoV (SARS-CoV-2), from Nasopharyngeal swabs (NPS)

- Utilizes **real-time PCR** to deliver results with Ct values
- **Faster** Turn Around Time
- **Emergency Use Authorization (EUA) for SARS CoV2 testing by US-FDA**

PATHOGEN	CLASSIFICATION (genome type)
Influenza A	Orthomyxovirus (RNA)
Influenza A, subtype H1N1/2009/pdm09	Orthomyxovirus (RNA)
Influenza A subtype H1	Orthomyxovirus (RNA)
Influenza A subtype H3	Orthomyxovirus (RNA)
Influenza B	Orthomyxovirus (RNA)
Coronavirus 229E	Coronavirus (RNA)
Coronavirus HKU1	Coronavirus (RNA)
Coronavirus NL63	Coronavirus (RNA)
Coronavirus OC43	Coronavirus (RNA)
SARS-CoV-2 (Covid-19)*	Coronavirus (RNA)
Parainfluenza virus 1	Paramyxovirus (RNA)
Parainfluenza virus 2	Paramyxovirus (RNA)
Parainfluenza virus 3	Paramyxovirus (RNA)
Parainfluenza virus 4	Paramyxovirus (RNA)
Respiratory Syncytial Virus A/B	Paramyxovirus (RNA)
Human Metapneumovirus A/B	Paramyxovirus (RNA)
Adenovirus	Adenovirus (DNA)
Rhinoviru	Picornavirus (RNA)
Enteroviruss	Picornavirus (RNA)
Mycoplasma pneumoniae	Bacterium (DNA)
Chlamydophila pneumoniae	Bacterium (DNA)
Bordetella pertussis	Bacterium (DNA)

*All samples will be reflex tested for SARS-CoV2 as per ICMR guidelines.

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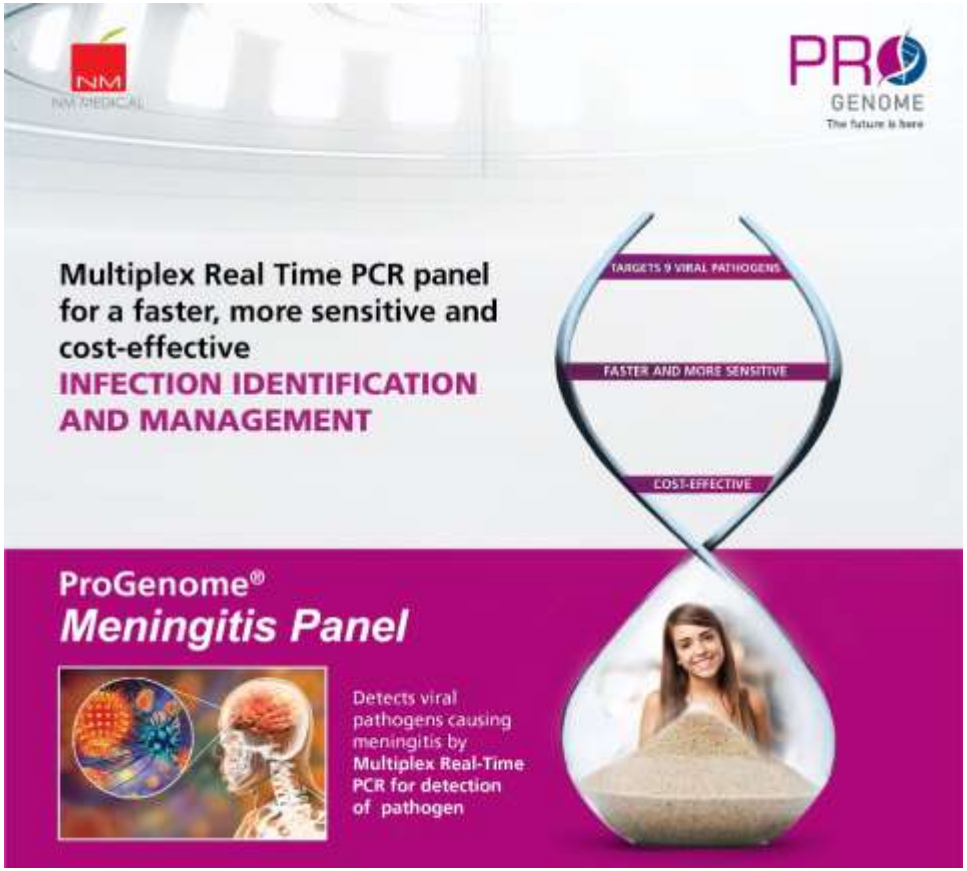
Multiplex Real Time
PCR panel for a faster, more
sensitive and cost-effective
INFECTION IDENTIFICATION AND MANAGEMENT

ProGenome®
Influenza Panel

Detects
Influenza A/B
H1N1/H5N5



Human cytomegalovirus	Epstein-Barr virus	Human adenovirus
Herpes simplex viruses 1and 2	Varicella zoster virus (VZV)	Enterovirus
Human parechovirus	Human herpesviruses 6 and 7	Human parvovirus B19

Dengue virus	Chikungunya virus
Salmonella spp	West Nile virus
Plasmodium spp	Rickettsia spp
Zika virus	Leptospira spp

ProGenome® STD Panel 1

- **7 pathogens causing Urethritis by multiplex real-time PCR for detection of pathogen genes from**
  Chlamydia trachomatis; Neisseria gonorrhoeae; Mycoplasma genitalium; Trichomonas vaginalis; Mycoplasma hominis; Ureaplasma urealyticum; Ureaplasma parvum

ProGenome® STD Panel 2

- **Detects 9 Viral / Bacterial pathogens causing Urethritis / STD by multiplex real-time PCR for detection of pathogen genes from**
  Chlamydia trachomatis; Neisseria gonorrhoeae; Mycoplasma genitalium; Trichomonas vaginalis; Ureaplasma urealyticum/parvum; Gardnerella vaginalis; herpes simplex viruses 1/2

ProGenome® STD Panel 3

- **Detects 3 Viral / Bacterial pathogens causing Genital ulcer / STD by multiplex real-time PCR for detection of pathogen genes from**
  herpes simplex viruses 1 and 2; Treponema pallidum