Neuberg DIAGNOSTICS

● India ● UAE ● South Africa ● USA

Neu INSIGHTS

Neuberg DIAGNOSTICS | CENTER FOR GENOMIC MEDICINE

PLASMASEQ

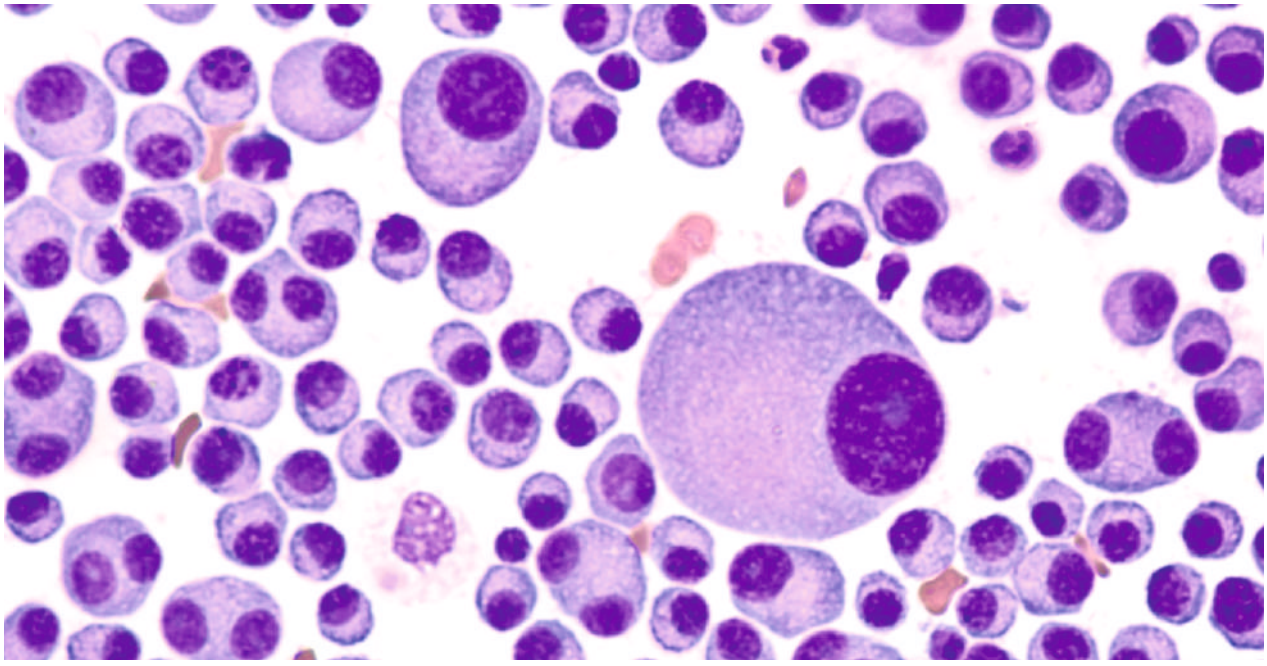
Serial number : 031 Edition : 1. 2024

Multiple Myeloma?

Multiple Myeloma (MM) represents a malignant proliferation of plasma cells.

Emerging Challenges:

- FISH (Fluorescence in Situ Hybridization) is limited in detecting mutations and has a restricted scope in identifying all genetic abnormalities, leading to potential diagnostic gaps and incomplete patient stratification.
- Moreover, the need for manual sample preparation and manual review in addition to the need for intact cells, significantly increases the risk of failure and as a result a lack of data on these samples.
- Given the complex translocation profile and copy number aberrations in myeloma, the implementation of a Next Generation Sequencing based assay has been challenging in this disease.



Introducing: PLASMASEQ

"DISCOVER THE UNDISCOVERED WITH NGS BASED ASSAY FOR MULTIPLE MYELOMA"

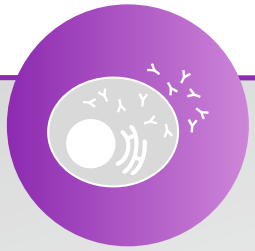
Next-generation sequencing (NGS) has played a crucial role in advancing our understanding of various diseases, including cancer. In the context of Multiple Myeloma (MM), NGS has been employed to unravel the genomic landscape, identify key genetic mutations, but till now has failed to make it to the clinic.

PlasmaSeq, a NGS based DNA only assay serves as the new benchmark for Myeloma diagnostics globally. Built under the guidance of Myeloma experts globally and deployed across the world, PlasmaSeq is the new standard of care. With a highly optimized panel design, novel informatics and extensive validations on thousands of samples globally gives you the confidence of reliable and rapid myeloma diagnostics like never before.

1 Stop Solution For Genetic Classification of Multiple Myeloma

What FISH Covers:

- Del (17p)
- Del (1p32)
- 1q21 amplification/gain
- IGH Translocations:
  - t(4;14) IGH::FGFR3
  - t(14;16) IGH::MAF
  - t(11;14) IGH::CCND1
  - t(6;14) IGH::CCND3*
  - t(14;20) IGH::MAFB*



What PlasmaSeq Covers:

- Del (17p)
- Del (1p32)
- 1q21 amplification/gain
- IGH Translocations:
  - t(4;14) IGH::FGFR3
  - t(14;16) IGH::MAF
  - t(11;14) IGH::CCND1
  - t(6;14) IGH::CCND3*
  - t(14;20) IGH::MAFB*

- TP53 Mutation
- BRAF V600E
- All RAS/RAF Mutations
- DIS3-DEL(13q) Mutation
- Genomic Profiling of ATM
- Trisomies & Hyperdiploidy across the genome

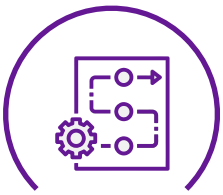
*rare IGH translocations

Specific Biomarker analyzed using PLASMSEQ:

Test Code	Test Name	Biomarkers Used	Clinical Significance	Incidence	FISH	NGS
MH020	PLASMASEQ	TP53 mutation	High-Risk	1-7%	✗	✓
		ATM	Poor Prognosis	~4%	✗	✓
		DIS3	Poor Prognosis	10%	✗	✓
		t(6;14) IGH::CCND3	Standard-Risk	~4%	✓/✗	✓
		t(14;20) IGH::MAFB	High-Risk	<2%	✓/✗	✓
		Trisomies & Hyperdiploidy across the genome	Standard-Risk	>40%	✓/✗	✓
		Del (1p32)	Poor Prognosis	~8%	✓	✓
		Del (17p)	High-Risk	5-20%	✓	✓
		1q21 amplification/ gain	High-Risk	40%	✓	✓
		t(4;14) IGH::FGFR3	High-Risk	15%	✓	✓
		t(14;16) IGH::MAF	High-Risk	3.5%	✓	✓
		t(11;14) IGH::CCND1	Standard-Risk	15-20%	✓	✓

Sample type:
Bone Marrow

TAT:
10-14 days



Methodology:
NGS

Note: Sample must reach the lab within 48hrs of sample collection. 1st pull of Bone Marrow sample is suggested.

Why PLASMSEQ?

- 1st Global NGS based test for Myeloma
- Validated for DNA input per sample of as low as 10 ng.
- >1000 Samples Validated in 3 countries with >95% accuracy.

FAB over Conventional Methods

F Features

- Eliminates the need of multiple assays like FISH and Karyotyping
- Able to pick up mutations including TP53 and others which are not checked by FISH

A Advantage

- Sample is not a limiting factor unlike in FISH where search for IGH partner can result into depletion of sample

B Benefits

- Covers CNVs across the genome relevant to Myeloma; hence, trisomies in all relevant chromosomes can be detected which is not routinely checked by FISH.

PARTNERS IN HEALTH

DR. ARPAN MEHTA

Laboratory Haematologist &
Molecular Haemato-oncologist
arpan.mehta@neubergdiagnostics.com
+91-9978338329

DR. PARTH SHAH

Scientific Advisor
parth.shah@neubergdiagnostics.com
079-40408181

DR. SANDIP SHAH

Consultant Pathologist
M.D. (Pathology & Bacteriology)
Laboratory Director
drsandip@neubergdiagnostics.com
079-40408181

ABOUT US

Neuberg Diagnostics, headquartered in Chennai, is one of India's leading diagnostic service providers, with its presence in India, UAE, South Africa and the USA. With 200 +laboratories accredited by CAP & NABL, Neuberg has emerged as one of the fastest-growing and most trusted diagnostic centres in India. The group has created accessibility to state-of-the-art diagnostic technologies. It possesses some of the finest clinical Pathologists, Biochemists, Geneticists, Radiologists and several other certified clinical professionals, with the capability to perform over 6000 varieties of pathological & radiological investigations and process 30 million test annually. Neuberg Diagnostics is bringing in newer-generation diagnostics techniques to practice in the area of personalized medicine in 250+ cities across the globe. They aim to provide affordable and accurate diagnosis to all strata of people with home collection service reaching 5500+ pin codes.

ABOUT NCGM

A specialized division of Neuberg Diagnostics, NCGM is committed to delivering comprehensive, precise, and cost-effective genetic testing services to all. Situated in Ahmedabad, we proudly house the FIRST private laboratory in India equipped with the NovaSeq6000 platform. Our vision extends beyond mere diagnostics; we aspire to be the ultimate destination for genetic disorder evaluation.

Our knowledge hub comprises experts in diverse fields, including Medical Oncology, Hemato-Oncology, Inherited Disorders, Reproductive Medicine, Transplant Immunology, and Infectious Diseases. Embracing a phenotype-driven and clinician-centric approach, we maximize the diagnostic utility of genetic testing. Each case is meticulously handled by domain specialists, supported by a proficient team of molecular scientists and genetic counsellors, in collaboration with clinicians.

Mission: Neuberg Centre for Genomic Medicine (NCGM) is dedicated to providing cutting-edge diagnostic and research-based genomic services, aiming to unravel the complexities of the human genome.

Expertise: Our team comprises skilled professionals committed to excellence, supported by advanced technology and seasoned bioinformatics specialists.

Cutting-edge Infrastructure: Our state-of-the-art genomic laboratory, spanning over 75,000 sq. ft., houses the latest technology, including the NovaSeq6000 platform and other best-in-class sequencing capabilities such as T7, Illumina, and Thermo Fisher machinery.

Global Presence: With a presence in over 50 cities across four countries (India, UAE, Africa, USA), NCGM serves as a global leader in genomic medicine, catering to diverse populations and healthcare needs.

Accredition: NCGM is recognized by 10X Genomics for single-cell transcriptomic, showcasing our commitment to innovation and excellence in genomic research.

FOR MORE DETAILS, CONTACT US AT

079 61618111
079 40408181
ncgmglobal.com

Neuberg
DIAGNOSTICS

● India ● UAE ● South Africa ● USA