

Understanding Myeloma Testing

Aspirate: Withdrawing fluid, tissue, or other substance from the body for further examination of a disease or condition.

Bone Marrow Biopsy: A procedure that involves collecting a small sample of bone marrow, usually from the hip bone, in order to be examined by a laboratory.

clonoSEQ: FDA-approved test that detects, counts, and tracks MRD in bone marrow samples from patients with multiple myeloma.

Cytogenetic Analysis: Testing of blood, bone marrow, or tissue in order to identify changes in chromosomes.

Fluorescence in Situ Hybridization (FISH) Test: A chromosome test used to identify specific genes or chromosome changes. A FISH test is essential at myeloma diagnosis.

M-Protein (M-Spike): Abnormal protein secreted by plasma cells that usually indicate disease when found in the blood or urine.

Molecular Testing (Genomic Profiling): Laboratory testing that identifies certain genes, proteins, or other molecules in a sample of tissue, blood, or other body fluid. In cancer, it may also be used to evaluate treatment or to make a prognosis.

Mass Spectrometry (MS): Ultrasensitive blood test that can measure the mass of a myeloma protein cell and has the potential to detect MRD-negativity.

MRD (minimal residual disease): Measurement of the number of myeloma cells found in the bone marrow of patients in remission after a clinical response to treatment. MRD is relevant, as the residual myeloma cells may indicate progression or relapse.

Next-Generation Sequencing (NGS): Technology to sequence DNA or RNA to identify genetic variations associated with diseases or other biological phenomena.

PET (Positron Emission Tomography) Scan: Imaging test that uses a special dye with radioactive tracers to allow your doctor to check for diseases in your body.

Measuring Treatment Response

- **CR** (Complete Response or Complete Remission)
- **VGPR** (Very Good Partial Remission)
- **PR** (Partial Response or Partial Remission)
- **MR** (Minor Response or Minor Remission)

CRAB: Common symptoms of myeloma

- **C – Calcium elevation (hypercalcemia)**
- **R – Renal failure (kidney failure)**
- **A – Anemia**
- **B – Bone lesions (bone pain)**

Myeloma Precursor Conditions

Monoclonal Gammopathy of Undetermined Significance (MGUS): Indicates an abnormal protein (M-protein) in the blood. While there are no signs or symptoms, occasionally MGUS may progress to a serious condition or blood cancer, such as multiple myeloma.

Smoldering Myeloma: A very slow-growing type of myeloma where abnormal plasma cells make too much of a single type of monoclonal antibody, and it builds up in the blood or is passed in the urine. Patients with smoldering myeloma usually have no symptoms, but they should be monitored closely for signs of progression to multiple myeloma.



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