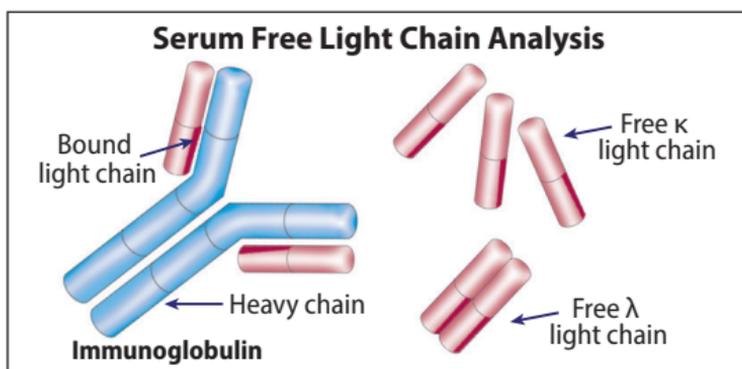




Freelite®

The Freelite test measures the amount of free kappa (κ) and free lambda (λ) light chain protein in the blood. If a doctor suspects myeloma, the clinical guidelines of the International Myeloma Working Group (IMWG) and the National Comprehensive Cancer Network (NCCN) state that the Freelite test should be ordered together with serum protein electrophoresis (SPEP).

- Normal plasma cells in the bone marrow make light chain and heavy chain proteins to help fight infection. When bound together, light chains and heavy chains create an immunoglobulin (Ig), also called an antibody, which is then released from the plasma cells into the circulating blood. "Free" light chains are not bound to heavy chains, so they circulate in the blood "free" from heavy chains.



- Myeloma cells (cancerous plasma cells) in the bone marrow are derived from a single cell or "monoclonone." These clonal myeloma cells secrete monoclonal heavy and/or light chain protein. The amount of monoclonal free light chains in the blood shows how many active myeloma cells are in a person's bone marrow. The normal ranges for Freelite are:
 - Free kappa: 3.3–19.4 mg/L
 - Free lambda: 5.71–26.3 mg/L
 - Kappa/lambda ratio: 0.26–1.65
- If either the kappa or the lambda results are higher than normal AND the kappa/lambda ratio is either too low or too high, this indicates the presence of monoclonal light chains.
- Changes in Freelite testing during routine myeloma monitoring can be one of the earliest indications that treatment is working or not working.
- The Freelite test is widely available. It is reimbursed by Medicare and most private insurers.



Hevylite[®]

The Hevylite test measures the amount of specific immunoglobulin (Ig) heavy and light chain pairs in the blood. These pairs are the full antibody with light chains bound to heavy chains.

- Immunoglobulins are produced by normal plasma cells in the bone marrow to help fight infection. Each immunoglobulin molecule is composed of one type of heavy chain bound to one type of light chain. Each plasma cell makes only one type of heavy chain and one type of light chain to form a whole immunoglobulin.
 - ◆ The heavy chain is one of five different types: G, A, D, E, or M.
 - ◆ The light chains are either kappa (κ) or lambda (λ).
- Myeloma cells (cancerous plasma cells) in the bone marrow are derived from a single cell or “monoclone.” These clonal myeloma cells secrete a single type of heavy and light chain combination or pair. The amount of the pair produced is proportional to the amount of myeloma in the bone marrow.
- The Hevylite test measures the normal immunoglobulin pairs as well as those made by the myeloma cells. It also measures the ratio between normal and myeloma pairs.
- The Hevylite test can help monitor myeloma during treatment, especially for patients with IgA kappa or IgA lambda myeloma, which is difficult to quantify with standard tests.
- The Hevylite test may identify residual disease and early relapse.
- The Hevylite test is covered by insurance. For a list of labs that perform this test, email info@thebindingsite.com or call 800-633-4484.

As always, the IMF urges you to discuss all medical issues with your doctor, and to contact the IMF's InfoLine specialists with your myeloma questions and concerns.

International Myeloma Foundation

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Improving Lives Finding the Cure[®]