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What is the role of the serum-free light chain assay in the diagnostic workup for multiple myeloma?

Hello, I am Dr. Edward Stadtmauer, a professor of medicine and chief of the Hematologic Malignancy Section at the Abramson Cancer Center of the University of Pennsylvania in Philadelphia, Pennsylvania. I am frequently asked, "What is the role of the serum-free light chain assay in the diagnostic workup for multiple myeloma?" The patients with multiple myeloma need to have full testing done to see how to monitor their disease. We are very fortunate in the disease myeloma that there is an objective measurement for most patients of the activity of their disease by measuring the monoclonal protein. This can be from the serum protein electrophoresis. It can be from quantitative immunoglobulins. It can be from the urine protein electrophoresis, but these tests do not show monoclonal protein for all patients, particularly patients with light chain disease, certainly patients with non-secretory myeloma. The newer test, the serum-free light chain test, is very sensitive and in over 90% of patients with all these various subtypes of myeloma will show abnormal levels or skewed ratios of light chain, either the kappa or the lambda. So, it is best to do for everyone at least a diagnostic test with the free light chain test, and for many patients it will become a test that will be routinely used to monitor the activity of the disease.