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## The evolving use of serum free light chain assays in clinical laboratory

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Monoclonal free light chains (FLCs) are important disease biomarkers in patients with plasma cell-proliferative disorders and for more than 150 years, the presence of Bence Jones protein in the urine has been the key indicator of monoclonal FLC production. Traditionally, clinical tests for monoclonal immunoglobulins have comprised serum protein electrophoresis (SPE), urine protein electrophoresis (UPE), and immunofixation electrophoresis (IFE). In 2001, novel nephelometric/ turbidimetric assays for the measurement of FLCs in the serum were described. These assays measure free kappa and lambda light chains using latex-conjugated polyclonal antibodies to epitopes that are sequestered when light chains are bound to heavy chains, but exposed when light chains circulate freely. This highly sensitive technique causes a paradigm shift with the availability of automated immunoassays that independently measure kappa and lambda FLCs in the serum. This presentation will discuss the data supporting the use of this simple serum test in diagnosis, management and follow up of different diseases.

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