

Technology Brief: Monitoring Multiple Myeloma Progression and Recurrence with Quantitative Mass Spectrometry

Docket Number: 08MA005

Summary	 Current methods use gel or capillary electrophoresis to monitor the relative amount and identify the type of the antibody that is secreted by the multiple myeloma (MM) cells. This quantitative mass spectrometry technique combines these two measurements and provides absolute quantification for each of the antibody chains (A,D,E,G, and M as well as kappa and lambda) into a test that can be applied to all MM patients. This test can be applied to MM patients, patients with the premalignant condition, monoclonal gammopathy of undetermined significance (MGUS), and other immune or blood disorders, such as Waldenstrom's macroglobinemia or HIV/AIDS.
Features and Benefits	 This method provides a new way to measure biomarkers in blood samples from multiple myeloma (MM) patients. Using quantitative mass spectrometry, smaller amounts of sample (~1 nanoliter) can be analyzed, reducing the burden of blood draws on the patient. The frequency of blood draws can be increased to follow the disease and provide more rapid treatment in the case of disease progression or relapse.
Stage of Development	Validated in human patients. Currently enlarging data sample, evaluating data quality, establishing reliable standards, and finetuning approaches and techniques to reduce processing time.
Inventor	Dr. John Koomen, et. al.
Publication and Patent Status	Patent application filed

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