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What is the role of the sFLC assay for the detection and monitoring of multiple myeloma?

Hello, my name is Philippe Moreau. I am a professor of Clinical Hematology at the University Hospital of Nantes in France, and I am often asked what is the role of the serum free light chain assay for the detection and monitoring of multiple myeloma? The free light chain assay is measuring within the serum, it is a very sensitive and specific test measuring the amount of free light chain, either kappa or lambda, that are secreted by the tumor cells within the serum. You know perfectly that the tumor cells are secreting an M-spike and M-component that is an entire immunoglobulin with two heavy chains and two light chains, but the two light chains can be secreted alone and they can be measured by this free light chain assay. So this test is measuring the amount of kappa light chain or lambda light chain, and we are also measuring the ratio kappa versus lambda. And it is important when the treatment is ongoing to reevaluate the response, and the free light chain can easily measure the reduction of the light chain secreted by the tumor cells. So in terms of complete remission when the disease is controlled and when the electrophoresis is normal, we have also to evaluate the normalization of the free light chain, the secretion of the kappa and the lambda light chains have to be normal, and the ratio is also going back to the normal range. So the free light chain is important to evaluate, the quality of the response and the CR, if possible. In some cases, we do have also some multiple myeloma that are excreting free light chain alone. We are calling these myeloma nonsecreting or oligo secreting, and this test is also very useful because the electrophoresis in that specific case are normal. So this test is becoming more and more used to follow the response of these patients.