

What is the difference between CR and MRD?

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Welcome to this *ManagingMyeloma.com* program. My name is Dr. Bob Orlowski. I am at the University of Texas, MD Anderson Cancer Center in warm Houston, Texas, and I serve here as the Director of the Myeloma Section and also the Interim Department Head for the Department of Lymphoma and Myeloma. One of the questions that I am frequently asked both by physicians as well as by patients is, "What is the difference between a complete remission, or CR, and MRD, or minimal residual disease?" In the past, complete remission was defined by the absence of a monoclonal protein in the blood and urine, and by having a normal-looking bone marrow with less than 5% plasma cells. The problem with that definition is we know that patients who are in complete remission by those criteria still may have leftover myeloma cells, and are therefore at risk for progression and relapse. MRD testing is a relatively new option that is now available in many places and can be done in different ways. Some of the MRD testing can be done by radiographic studies, such as magnetic resonance imaging or PET scanning. Another important way is by doing a bone marrow and performing what is called flow immunophenotyping. This is a way to basically fingerprint plasma cells in the bone marrow and determine if they are normal or abnormal; 2% plasma cells, for example, in the bone marrow of a myeloma patient that are all normal has a much different implication than if a patient has 2% plasma cells, but they are all myeloma cells. Flow immunophenotyping, if that is negative, is one of the most popular ways to say that the patient is MRD negative. This is, therefore, a deeper level of complete remission, and there are many studies that show patients who are in CR and are MRD negative have a better outcome than patients who are in CR but are MRD positive. Also, there are studies being designed to look at whether treating patients who are in CR but MRD positive to convert them into MRD negative will be of benefit in prolonging their survival. Many physicians suspect that the answer is yes, meaning that treating an MRD positive patient to convert them to MRD negative is valuable, although we do still have to do the studies to prove that to you. If this is proven, MRD testing will be a good way for you to decide if your patient needs to get more treatment or not. Thanks for tuning into this program. I hope it has been helpful to you, and I want to thank the people at *ManagingMyeloma.com* for making this possible.