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What is the difference between the IPSS and the IPSS-R, and why should I use the IPSS-R in my patients?

Welcome to ManagingMDS, my name is Guillermo Garcia-Manero, I am a professor of medicine in the Department of Leukemia at MD Anderson Cancer Center. I am frequently asked, “What is the real difference between the IPSS and the IPSS-R, and why should I use the IPSS-R in my patients?” This is a very good question and I think it is very important. The IPSS has been our prognostic model for many years now, and it is a model that had quite a bit of simplicity by the fact that the characteristics were simple and we could basically compute it without the help of any device. IPSS included percentage of blasts, the number of cytopenias, and a very simple cytogenetic classification. And this IPSS has actually helped us evaluate and prognosticate thousands of patients and most importantly actually has allowed us to develop several drugs for myelodysplastic syndromes. The problem is that over the years we realized that the IPSS was not powerful enough to actually predict with precision the prognosis of most of our patients with MDS. And therefore, a very large collaborative effort which I was a part, with multiple investigators all over the word, put together information on thousands of patients with myelodysplastic syndrome to form or create this new IPSS-R classification that is now the standard classification that we should use to report our patients. Now the IPSS-R is more complex. The main difference is that it uses a more complex cytogenetic classification where we now actually have not only the three original groups, we have actually a more precise subset analysis of the cytogenetic alterations, and therefore I think most of us would need some form of device to actually calculate the score. So that is the key part. Also, it has more detailed threshold of percentage of blasts and cytopenias. So the classification actually is not dissimilar to the original IPSS, just more detailed, particularly when it comes to the cytogenetic classification. And also we need to realize that we pay a little bit more attention to the percentage of blasts, so for instance before we call blasts over 5%, now we need to realize that there are differences in terms of prognosis if you have more than 2% blasts. There is also, in my opinion, a little bit of difficulty using the IPSS-R, that is with the IPSS we had four subsets: low, intermediate 1, intermediate 2, and high. With the IPSS-R now we have five, with an intermediate group in between that can go either into a lower risk type of situation or a more high risk situation, and I am not sure the investigators know what to do exactly with the information that comes with the intermediate group at this point. And then the last issue that you have to remember when you use these classifications is
that there is no drug yet that has been approved with IPSS-R. So when you are going to make a decision to use a particular compound, you are going to still be using either all FAB criteria or your IPSS criteria. So how do I do this in my day-to-day practice? I will calculate survival based on the IPSS-R because I think that classification is the one that gives us the most detailed and precise prediction of outcome, but then when I make my decision for therapy, I still use the IPSS criteria, that is by the way the way most of our drugs are now currently being used. I think that these models are also going to be used in transit, soon we are going to have molecular modifications on IPSS-R, and my prediction would be in the next few years we are going to have very complete models, perhaps a little bit easier to use, that will also include molecular information. Thank you very much for this question.

**Additional Resource**
Revised International Prognostic Scoring System (IPSS-R) for Myelodysplastic Syndromes Risk Assessment Calculator
*Developed by the International Working Group for the Prognosis of MDS (IWG-PM) under the aegis of the MDS Foundation, Inc.*
http://www.mds-foundation.org/ipss-r-calculator/