Blood Cancer Video Library

The Prevalence and Epidemiology of Blood Cancers

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Dr. Marco Ruiz: Good afternoon. How are you? My name is Marco Ruiz, I'm one of the physicians here at the Miami Cancer Institute, and I'm a hematologist oncologist. Chief of HIV Oncology and HIV bone marrow transplantation. And I'm here with you to discuss three main topics today. And the first topic is the prevalence and epidemiology of blood cancers. Follow up a discussion of the diagnosis and management of blood cancers, and subsequently fall the role of an H and O Bone marrow transplantation and order of therapies for blood cancers. So tackling a tough topic, number one, blood cancer are in general are not as prevalent as other types of cancers in the US. This kind of [inaudible] about five to 10% of the population may be affected with blood cancers. The most common blood cancers are basically acute leukemia's, chronic leukemia's, lymphomas in general. It could [inaudible] lymphomas or lymphomas. And also other entities such as myelodysplasia syndrome, myleofibrosis, and multiple myeloma.

And have note there are other kind of type of blood cancers that are not as frequent as the ones we mentioned. But there are also present and those include specific cancer such as lymphoplasmacytic lymphoma, [inaudible] lymphomas, and lymphomas in a specific populations including the lymphomas in the HIV population. Among these kind of different kinds of cancers. Some of them are aggressive such as the acute leukemia's. Others are more indolent such as the chronic leukemia and certain types of lymphomas. And others are blood cancers such as myelodysplasia or myleofibrosis that in the majority of cases they're going to need an intervention such as a bone marrow transplantation. In general terms, the reasons for the development of blood cancers include the genetic mutation, genetic alterations, of what we call chromosomal alterations, in less than probably 1% of the subset of the population.

We may have factors such as prior chemotherapy treatment, prior radiation treatments and certain other conditions such as exposure to pesticides and so forth that may contribute to the development of these cancers. But these are rare and the minority two cases. I would say that in about probably 95 plus percent of the type of cases is usually the presence of genetic alterations of chromosomal abnormalities and mutations that cause the development of these kind of blood cancers. In terms of who these affect most, there's a equal distribution almost in males and females for certain kind of lymphomas for males and than more affected than females. For leukemia's in general, the prevalence is almost equal. There's no big difference in terms of gender distribution. In terms of age groups, in the majority of cases, leukemia's and blood cancers are conditions of the aging population.

But in certain circumstances there could be patients who are very young who suffer from acute leukemia's, for instance, chronic leukemia's, and certain kind of lymphomas. So general terms is more of an aging population and kind of issue. But in other scenarios, sometimes they can be present in the young population. In terms of the most common subtypes of blood cancers. The ones that are most common and we treat, we face on a regular basis. Our number one acute myeloleukemia followed by acute lymphocytic leukemia, then the chronic leukemia's such as chronic myelocytic leukemia and chronic lymphocytic leukemia. And then the P cell lymphomas, of course followed by the different subtypes of P cell lymphomas that can be divided into the indolent lymphomas and the aggressive lymphomas.

And of course there are many different subtypes that are part of each category followed by multiple myeloma and then other conditions such as MDS or myelodysplasia syndrome, myleofibrosis and so forth. In terms of how aggressive this conditions are. Traditionally acute leukemia's, tend to be very aggressive opposed to chronic leukemia that are more indolent, or low growing. And within the subset of lymphomas that we discussed, there are indolent lymphomas that are usually low growing or indolent. There are aggressive lymphomas that in the majority of cases are treatable and they tend that we have for every blood cancer is to treat patients and the intent is to cure them. In the subset of other conditions such as myelodysplasia syndrome, which is basically a bone marrow problem.

Traditionally we have patients who are low risk and also high risk, who in the low risk setting they may need some very if you will, not quite an aggressive interventions, but patients who are in the high grade risk usually they need very intensive interventions followed by other treatments such as bone marrow transplant. Myleofibrosis, which is another bone marrow issue in which the bone morrow fails to produce elements. Also,

we classify patients into the low risk category. Patients who, unless they have some symptoms, we don't treat when we start treating these patients when they will have some symptoms. And also patients who are in the hybrid category in which we treat patients and of course, with the intent to proceed with a bone marrow transplantation as a part of the curative intent for the disease.