Mayo Clinic Q & A- Dr. Jose Villasboas Bisneto - Lymphoma -...

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SPEAKERS

Dr. Jose Villasboas Bisneto, Dr. Halena Gazelka, Narrator

N Narrator 00:01
Coming up on Mayo Clinic Q&A,

D Dr. Jose Villasboas Bisneto 00:04
Lymphoma is not one disease that we can put a finger on in terms of a causative or one single cause. Aging increases the risk of lymphoma and that's more likely because throughout our life we accumulate genetic errors in our DNA. These mutations, if happening in specific genes on our body can make us prone for the development of lymphomas.

N Narrator 00:26
Lymphoma is a cancer of the lymphatic system, which is part of the body's germ fighting network. There are many types of lymphoma and knowing exactly which type you have is important to developing an effective treatment plan.

D Dr. Jose Villasboas Bisneto 00:39
It is a disease that has many different faces. And that's why it's really important to

understand from the beginning, if you have an accurate diagnosis, there are many of these diseases that are curable, meaning that we are treating to get rid of the lymphoma and hoping it will never come back again.

D **Dr. Halena Gazelka** 00:55

Welcome, everyone to Mayo Clinic Q&A. I'm Dr. Halena Gazelka. Today we're going to talk about a type of cancer called lymphoma. Lymphoma is a cancer of the lymphatic system, which is part of the body's germ fighting network. The lymphatic system includes the lymph nodes or glands, the spleen, the thymus gland, and the bone marrow. Well, many types of lymphoma exist. The main subtypes are Hodgkin's lymphoma and non-Hodgkins lymphoma. What treatment is best for a patient depends upon the lymphoma type and its severity. Joining us to discuss the various types of lymphoma and how they are treated is Mayo Clinic hematologist, Dr. Jose Villasboas Bisneto. Thanks for being here today, JC.

D **Dr. Jose Villasboas Bisneto** 01:40

Good morning, and thanks for having me here Halena.

D **Dr. Halena Gazelka** 01:42

Well, it's always fun to learn about something new. All of our listeners know that I like to learn something new every day. So, I'm excited that we can have a talk about lymphomas today. Tell me a little bit about the signs and symptoms of lymphoma.

D **Dr. Jose Villasboas Bisneto** 01:56

Absolutely. So, it is really unfair to put all the diseases that lymphoma actually are in one category. Just like cancer, it's hard to put everything under one umbrella. And when I talk to my patients about lymphoma, I try to really divide into you know, the main groups and how they present and how patient patients find them can be fairly different. For example, there are very aggressive types of lymphoma. And those typically present with symptoms. And those are the types that I usually tell the patients those are the lymphomas that find you as opposed to those that you find by accident.

D **Dr. Halena Gazelka** 02:33

I like that.

D

Dr. Jose Villasboas Bisneto 02:33

So, the aggressive lymphomas can present with high fevers or cyclic fevers. It can present with night sweats, or sweats in general, normally not a subtle type of sweat. I'm talking about drenching night sweats. When I ask my patients, I ask them, have you ever seen if you have to change your sheets in the morning, you have to change your pillowcase, or change your pajamas when you wake up because you're drenched in sweat. That's the type of night sweats that are really associated with lymphoma, not feeling just a little bit hot at night. And then it can also have unintentional weight loss. So, you're not trying to diet or exercise but you're losing pounds. Or in some cases patients are exercising but they're losing more pounds than they expected based on their previous experience. So, those are what we call constitutional symptoms that can be present in lymphomas. And because lymphomas can happen in virtually any part of the body, you know, you can have symptoms associated with the presence of the lymphoma or growing mass, let's say in your abdomen or in your chest that can lead to abdominal pain, discomfort, shortness of breath, or chest pain. So, those are, you know the signs or symptoms that can be present in patients with aggressive lymphomas, those that are rapidly growing inside the body. And that's quite different from indolent or slow growing lymphomas. And those are the ones that are more likely to be found by accident. So, a patient goes to the emergency room with a kidney stone, someone gets a CAT scan, and they see a large lymph node that may have been sitting there for years. And someone eventually gets a biopsy and we find an indolent, slow growing lymphoma, and those are typically not presenting with many symptoms. If anything, they can present with an enlargement of a lymph node. Those are the typical kind of two groups of presentations.

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Dr. Halena Gazelka 04:19

JC, what causes lymphoma and who's at risk for developing it?

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Dr. Jose Villasboas Bisneto 04:25

So, the main risk for developing lymphoma is actually aging itself. So, unlike other cancers and for example I try to explain that we know the clear association between smoking and development of lung cancer, or the presence of the human papilloma virus and development of cervical cancer in women. There's not such a strong link in lymphoma that you can point to one particular cause that leads to lymphoma with very rare exceptions. And the exceptions are, for example, the presence of the H. pylori infection in the stomach can lead to a very specific type of lymphoma in the stomach that sometimes doesn't need any treatment other than the eradication of the bacteria itself. But aside from these unique cases, lymphoma is not one disease that we can put a finger on in terms of a causative or, you know, one single cause. But there are themes. So, we know

that just like I said, aging increases the risk of lymphoma, and that's more likely because throughout our life, we accumulate genetic errors in our DNA. So, our DNA changes and accumulates mutations, and these mutations, if happening in specific genes of our body can lead to, you know, can make us prone for the development of lymphomas. The other theme is immunity, we know that immunity is tightly related to lymphoma. And we know that because patients who are under treatment for diseases that require them to, decrease their immunity, for example, transplant patients or patients with autoimmune diseases. Those treatments that are used for those patients can increase your risk of lymphoma as well. And then finally, just general risk factors that have been associated and sometimes those take a lot of attention from the media. We know associations between Agent Orange and lymphoma, or more recently some pesticides and lymphoma. Those are associations so far, we can really say that those are causations they are not necessarily one direct link between you have exposure and you have lymphoma. So, those are the main risk factors. There are also some familial syndromes, extremely rare, that can predispose one to developing lymphoma later in life.

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Dr. Halena Gazelka 06:42

JC, I have a question about what you said about lymphomas being more common with age. In the intro, I had mentioned that there's Hodgkin's lymphoma and non-Hodgkins lymphoma. And I've been aware of younger individuals having Hodgkin's disease. Is that true? Or is that just my perception?

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Dr. Jose Villasboas Bisneto 06:59

That's very correct. Actually, Hodgkin's lymphoma has two peaks. So, it peaks at the college age, you know, between 20 and 35. And that's where most people we hear about patients with Hodgkin's lymphoma, because that's quite a dramatic event in a young adult's life. And then there's a second peak, and that second peak is at age 65 to 75. And that's, you know, in between these two groups, there's really a valley and there's very little incidence in that kind of middle age, and that's the opposite for non-Hodgkin's lymphoma, you have a growing peak that starts in adult life and keeps just increasing as the person ages.

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Dr. Halena Gazelka 07:39

JC, if an individual or if their physician is concerned that they might have a lymphoma, what is done next to diagnose it?

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Dr. Jose Villasboas Bisneto 07:47

Yes. So, let's say a patient presents with an enlarged lymph node under the arm or on their neck, the very next step is to just get a basic evaluation just to make sure that we have a blood count, make sure there's nothing obvious circulating in the blood, which is rare for most lymphomas. Normally, a blood count is normal for patients with lymphoma. And then the first and foremost is to get adequate tissue diagnosis, Halena. And that's because I stress adequate because many times I see patients will come to me after having been through two or three needle biopsies in which you know, they took a very small piece or didn't even take a piece and just aspirated it with a needle. And that's not usually sufficient for a diagnosis of lymphoma. And that's because to diagnose lymphoma, and to make sure that we have the accurate subtype of lymphoma, we normally need an adequate amount of tissue to look at the architecture of the tissue. Where are the cells that look malignant, the cancer cells, and how are they in context with the other cells of their surrounding? That's because that information is crucial to actually accurately diagnose the patient. So, adequate tissue biopsy and many times a small incision in which we actually take a surgical piece of the tissue is the best way to accurately diagnose lymphoma.

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Dr. Halena Gazelka 09:07

So, what do you do after you have a diagnosis? How is lymphoma treated?

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Dr. Jose Villasboas Bisneto 09:11

So, after the you know the immediate diagnosis, we will proceed with staging like most cancers, and in this case, we will try to find out whether the lymphoma is really localized to that one lymph node chain or lymph node area, or has it spread to more than one other lymph nodes and to other tissues that are you know, prone to have lymphoma such as bone marrow. So, normally, there'll be some sort of scan done. Normally in lymphomas we favor a scan, such as the PET CT scan, which gives you both, you know, atomic as well as functional information. So, and that's, you know, the initial test that we will do for most lymphomas, and in some cases, we need also to sample the bone marrow of the patient. So, we're using a bone marrow biopsy to find out whether lymphoma is also in the bone marrow, and that will give us the ability to stage between stages one through four. And finally, you know, come up with a treatment plan for lymphoma. And lymphoma is generally treated with a, you know, with the combination of different treatment options, which are, you know, definitely we use chemotherapy. But more and more we are combining chemotherapy with additional tools such as radiation, and radiation and chemotherapy. When we use them together, we call that combined modality treatment. And in lymphoma, at least for the B cell lymphomas, which are the most common type, we

also use immunotherapy to treat patients and that is using drugs that will not necessarily kill the lymphoma directly but will actually use the patient's own immune system to help get rid of the lymphoma and those are used typically in combination with chemo. So, we'd often say that we're going to give the patient chemo-immunotherapy because we're combining both agents that use immune system as regular chemotherapy. And in obviously, in some cases, those that are aggressive or relapsing, so the cancer returns after the initial treatment, we need to resort to some specialized treatments such as stem cell transplantation. And more recently, we are using cellular therapy such as you know, this new treatment called CAR-T cell therapy, which stands for chimeric antigen receptor T cell therapy, which is a way to use the patient's own immune cells to get rid of the lymphoma. It's quite effective.

D Dr. Halena Gazelka 11:30

It sounds very technical to me. Tell me JC, we haven't talked much about children, but is the treatment for lymphomas in children different from that in adults?

D Dr. Jose Villasboas Bisneto 11:44

In some ways, yes. For the most part, we have the same tools that we use also chemotherapy, immunotherapy, radiation to treat children to. The main difference is that almost all lymphomas that present in children, they are treated with a curative intent. So, with a with a goal of getting rid of the lymphoma. In many times that treatment is quite aggressive because we want to make sure that that child has a full life. And in some cases, in adults, we have slow growing types of lymphoma in which the goal is not to get rid of the lymphoma, because many times that's not possible, the goal is to control it. And therefore, we have to choose our tools so that we really balance the risks and benefits of treatment. And in terms of children, you know, we almost always go with an aggressive therapy to really get rid of that cancer. But at the same time, you know, making sure that we minimize any long-term side-effects of the treatment as those children grow.

D Dr. Halena Gazelka 12:49

So, we were talking earlier you mentioned cervical cancer, I think. And so, in many types of cancers, cervical cancer being one, breast cancer, colon cancer, there are screening tests that can be performed at someone's annual exam or otherwise. Are there screening tests for lymphoma?

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Dr. Jose Villasboas Bisneto 13:07

There are not. There is currently no way to effectively identify lymphoma for patients who are concerned about it. There are definitely studies, you know, I'm looking into that very question. But at this time there's not a standardized way to identify at an early stage a patient with lymphoma.

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Dr. Halena Gazelka 13:28

I'm going to ask you this next question, but you've already told me that aging is one of the highest risk factors for the development of lymphoma and none of us can stop the fact that we're aging. But is there anything that can be done to prevent lymphomas?

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Dr. Jose Villasboas Bisneto 13:41

Great question. So, in terms of one singular intervention, so we know that if you stop smoking or decrease the risk of lung cancer, right, if you screen for the HPV virus and treate it, we decrease the risk of cervical cancer. There's not one single thing that you can do to prevent lymphoma. Obviously, like I said, the immunity is important. And that's part of the aging process, and is also something called, you know, aging of the immune system or you know, senescence. So, as strong as you can keep your immune system, at least in theory, you're better off in trying to prevent cancer and general lymphoma included. So, although I don't have one particular thing that I can tell patients to do, we do have some information that at least hints towards very potential interventions that are under investigation. And I mentioned that because we know, you know, through a study done here at the Mayo Clinic in collaboration with the University of Iowa, that patients after diagnosis of lymphoma, who exercise actually do better compared to those that don't. We also know that patients at the time of diagnosis, if you compare their exercise activity with those of you know people of the same age, and if they have an exercise level that is above average, their outcomes in the treatment of lymphoma is better. And that to me tells me that there is definitely a link between healthy lifestyle, exercise included, and either the prevention or the treatment of lymphoma. So, although we don't have one study to absolutely prove that by exercising you will decrease your chance of lymphoma, it is very reasonable to believe that, you know, these interventions which are sometimes, you know, common sense but in many cases very important, could lead to a decrease, you know, later in life in the development of cancer and lymphoma, perhaps also included.

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Dr. Halena Gazelka 15:33

I feel like what seems that it may be common sense and very easy to implement, it's not

necessarily so. I think almost everyone that I interview on this program says that a good healthy lifestyle including exercise and a good diet are beneficial for almost all areas of our health.

D Dr. Jose Villasboas Bisneto 15:56

Absolutely. And one thing that I tell my patients about exercise is it is you know, again, everyone knows that exercise is good for you. But most people think that the way it, you know, helps your life is just by improving cardiovascular health which is very true. We know decreases your chance of stroke and myocardial infarction, heart attacks. But in the case of this study, we actually showed that the chance of dying from lymphoma itself is decreased when you exercise compared to when you don't. So, it's not because people are living longer because they have less heart attacks, and therefore they did better. Well, that's true as well, but what we found is a direct link between exercise in lymphoma specific mortality for the chance of dying from lymphoma itself. And although studies are still underway to explore this link, I have to believe that the link is mediated by the immune system. So, those patients who are exercising they have a healthier immune system and therefore allows them to keep the lymphoma under control and to protect them from having to come back later.

D Dr. Halena Gazelka 17:01

That's very interesting. What are the survival rates like for lymphoma?

D Dr. Jose Villasboas Bisneto 17:06

Yeah. So, that's a very hard question to answer. And that's because although we say you have lymphoma, inside that umbrella there are over 100 different types that are now recognized by the World Health Association. So, it's really unfair to give you a number that represents all lymphoma groups, because the best, you know, widely, but I'll give you some idea of at least dividing between, you know, the main types, like I said, the aggressive lymphomas and the slow growing lymphomas. So, in terms of the aggressive lymphomas, and that includes, you know, things like Hodgkin's lymphoma is considered an aggressive lymphoma, and diffuse large B cell lymphoma, which is the most common type of lymphoma in the United States. The survival rates for Hodgkin's lymphoma, you know, when they look you know, according to the stage will vary anywhere from you know, 70 to 90%. For diffuse large B cell lymphoma, that number usually sits between 60 and 70% for the five year survival rate. Because that's where most studies will measure to. When we look at indolent lymphomas, and those are the ones that are again the incidentally found, those that are found by accident, not the type that finds the patient,

right. So, those grow very slowly. So, the five year survival rate for those indolent lymphomas slow growing type are sitting around 90%. That's because many patients will actually have that lymphoma for many years, and we don't even need to treat sometimes, we just observe and wait for a true indication for treatment.

D Dr. Halena Gazelka 18:39

JC, when you were talking earlier about all the modalities that can be used to treat the different types of lymphoma, and now that you've told me there are over 100 different types, how can an individual be certain that they are receiving the best care that they can receive if they receive a diagnosis of lymphoma?

D Dr. Jose Villasboas Bisneto 18:57

Of course, the main problem with lymphoma is accurate diagnosis. It first of all is a rare cancer in proportion to the other cancers. Now there are over a quarter million cases of breast cancer in the United States per year. And there are about 70,000 cases of lymphoma per year. So, put this in perspective, most cancer doctors will not see many lymphoma patients in any given month or in a given year. And in comparison, you know, having so many different types inside one simple, you know, label lymphoma, you know, really means that you have to, you know, have your diagnosis verified by a center with high volume. So, someone who actually sees this type of disease, you know, day in and day out. So, one is a diagnosis and once the diagnosis is done, accurate staging is really necessary for you know, for designing the treatment plan which has to be individualized. You have to take into consideration the obvious fact of what type of lymphoma this is. How does it normally behave? But at the same time, you have to take into consideration the characteristics of the patient? What is the age of this patient? What are the risk factors they have? What other medical problems do they have? And then decide what's the right treatment for them. So, it is really important to seek, you know, attention and care, least for one time opinion in a center with a high volume of patients with lymphoma.

D Dr. Halena Gazelka 20:26

And JC, is it something that patients can ask for if they want their pathology to be sent to another center to be examined?

D Dr. Jose Villasboas Bisneto 20:34

Very much so. You know, Mayo Clinic, you know, sees a lot of lymphoma patients and our hematopathologists, those are the pathologist specialists who really are the experts in

diagnosing lymphoma. They see patient samples from patients coming from all over the world. And that's something that they can actually have requests from their local doctor to be pursued.

D Dr. Halena Gazelka 20:57

Tell me a little about ongoing clinical trials at Mayo Clinic for lymphoma.

D Dr. Jose Villasboas Bisneto 21:03

Absolutely. So, the lymphoma group in Mayo Clinic is very active in terms of experimental research. At the present, I just took a look before joining our call Halena. We have in our catalogue, over 106 open studies for lymphoma at the Mayo network meaning either here in Minnesota, Florida and Arizona. Some of those studies are interventional studies, meaning we're giving some sort of therapy, and there's about 50 of those currently open as of today. And some of those are observational studies, in which we're looking into risk factors or prognosis of patients. These will include trials, that are testing a variety of different interventions. So, we have trials that are testing, you know, drugs such as different types of, you know, agents that kill the cancer cell by, you know, directly. We have targeted therapy drugs. Those are usually drugs that are acting on a specific gene or a specific metabolic pathway or a specific part of the cell in trying to reverse that problem to help cure the cancer. We also have immunotherapy trials, so those are agents that are, you know, helping the patient's immune system get rid of the lymphoma. And we also have cellular therapy trials, such as the CAR-T cell trials in which we're genetically modifying the patient's immune system to then best fight, you know, best against the lymphoma themselves. And there are obviously combinations of those in those trials as well.

D Dr. Halena Gazelka 22:45

Sounds like an exciting area of research.

D Dr. Jose Villasboas Bisneto 22:49

Very much so. You know, many of my other oncology colleagues are in envy of lymphoma oncologists because we seem to have all the, you know, the tools coming to lymphoma all at one time. And obviously, the field is evolving in cancer care in general, but in lymphoma we have made great progress in the last 5, 10 years.

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Dr. Halena Gazelka 23:14

JC, one of the issues that we've been concerned about Mayo Clinic both in relation to medical care at baseline and also to clinical trials are that there are sometimes disparities. Some individuals have better access to either clinical trials or to treatment than others might. Are there disparities related to lymphoma research and treatment?

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Dr. Jose Villasboas Bisneto 23:35

Yes, there are disparities in the United States in terms of lymphoma access to care and also lymphoma outcomes, meaning you know, the chance that someone will, you know, will be successful in their lymphoma treatment. So, if you look at the numbers, as it currently stands Halena, the incidence or the likelihood that one given person will have a diagnosis of lymphoma is still higher in white patients compared to non-white, you know African American, Hispanic population. But if you look at the outcome, if you try to match by, you know, the risk factors age, stage and type, the outcomes in the minority population are disproportionately lower compared to the white population. So, there's still a need to understand exactly the link between these two. But there's clear disparities in terms of lymphoma outcomes in this country.

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Dr. Halena Gazelka 24:31

Is that an area that we're trying to work on at Mayo Clinic?

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Dr. Jose Villasboas Bisneto 24:35

Absolutely. You know, with the Mayo Clinic Cancer Center there's a great focus now into understanding and fixing, you know, healthcare disparities in cancer in general and lymphoma included. There's a great focus for our group.

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Dr. Halena Gazelka 24:51

That's wonderful. I'm happy to hear that. Anything else you'd like us to know about today, JC?

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Dr. Jose Villasboas Bisneto 24:58

I think that lymphoma is, you know, one of the most interesting cancers in my opinion. I'm very biased.

D Dr. Halena Gazelka 25:05
I'm glad that you feel that way.

D Dr. Jose Villasboas Bisneto 25:06
It is all I do. You know, I really only see lymphoma patients with rare exceptions. And it is a disease that, you know, has many different faces. That's why it's really important to understand from the beginning if you have an accurate diagnosis, there are many of these diseases that are curable, meaning that we are treating to get rid of the lymphoma, and hope it will never come back again. And that's a big deal because some cancers, even in advanced stages. So, if you take a patient with, you know, breast cancer, pancreatic cancer I think is a better example, who is stage four. Currently, that is unfortunately, a diagnosis for which we don't have a cure. In lymphoma, I try to stress that to my patients that there is a chance of curing stage four lymphoma. And that's why it is important to make sure you have the accurate diagnosis, you have the accurate staging, and that will give you the best chance of having the best outcome.

D Dr. Halena Gazelka 26:09
Do you see we keep talking about accurate diagnosis? Do you ever see patients who have had a diagnosis elsewhere and then you review their pathology? Or have it reviewed here or obtain new samples and change the diagnosis?

D Dr. Jose Villasboas Bisneto 26:25
Absolutely. It's not very frequent. But you know, because we see a lot of patients, we do see that happening. Some patients, which we change sometimes from finding what was once called a slow growing lymphoma, and when we review it, we find it actually to be an aggressive lymphoma. And the treatment will change completely, dramatically from one type to the other. So, yes that happens.

D Dr. Halena Gazelka 26:56
So, a good area to consider a second opinion, I imagine.

D Dr. Jose Villasboas Bisneto 27:00
Absolutely.

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Dr. Halena Gazelka 27:01

Thanks for being here today, JC.

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Dr. Jose Villasboas Bisneto 27:04

Thank you for having me here, Halena.

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Dr. Halena Gazelka 27:06

Our thanks to Mayo Clinic hematologist, Dr. Jose Villasboas for being here today to talk to us all about lymphomas. I hope that you learn something I know that I did. And we wish each of you a very wonderful day.

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Narrator 27:19

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