Mistletoe In Integrative Oncology: Uncover Its Immunologic Benefits Transcript

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Introduction and Background

Doctor Steven Johnson, thank you so much for joining me at this segment of Cancer Breakthroughs. Thank you for having me. For all the viewers, Steven Johnson was chief resident of internal medicine at the University of Massachusetts Affiliated Hospitals, in which, in 1996 he has taught frequently in Europe and the US on integrative medicine, oncology and pharmacy.

Anthropomorphic, biological, botanical and nutritional modalities. Doctor Johnson directed one of the first major integrative medicine clinics in the United States, bringing together multidisciplinary team with extensive conventional, holistic modalities of care.

He has spent the majority of his career deeply immersed in clinical practice, helping patients across the country with oncological, autoimmune and challenging degenerative illnesses.

And Doctor Johnson has written numerous magazine articles, been a guest on several radio shows and podcasts. He's a coauthor and project editor of the new book, which I have on My Shelf, which is Incredible mistletoe and the Future of Integrative Oncology, and has written and published several small educational books on homeopathic and botanical medicine, and is a well-known consultant for integrative pharmacy, and has formulated numerous botanical and holistic medicine used internationally, as well as assisted in the development of extensive botanical gardens for pharmacy production.

Recently, Doctor Johnson has been the director of the first European Mistletoe Integrative Oncology Training Program and serves as a mentor to clinicians across the country.

He has served as a president of the Physicians Association for anthroposophy, and is the founder of the Foundation for Health Creation, to promote resilience in our challenging times, he'll be launching a new resilience course for patients and practitioners in the near future.

He's also medical director of the Camphill Village Medical Clinic for adults with developmental disabilities, and runs a part time private consulting practice.

He's active as a strong advocate for an integrative model of health care and public health in North America. You've done a lot. You're doing a lot. How do you have time for a lot?

Yeah, that was a mouthful. Yeah. I guess as you get into your 60s, it's a lot of time has passed. So one of the therapies that, you know, you're one of your latest books on mistletoe and it's such a powerful therapy is something that that I do here at the center.

Tell me a little bit about how you came about mistletoe and why that really connected with you. Yeah. I had an interest, as you could tell from my biography, in plant medicine.

Always have been very interested in botanical medicine. And I met mistletoe, particularly through the anthroposophical medicine. I know that's a mouthful.

Anthropomorphic medicine, but actually, in Western Europe, it is the form of medicine around which whole clinic and hospitals have been built, where both integrative modalities and conventional modalities of care are given, including in oncology and mistletoe is actually used in those settings.

So I had the opportunity of my training, even as a resident, to go over and spend some time in those hospitals, and I could see it being used adjunctive with, you know, modern oncology.

And I was very impressed at that time. It made an impression on me such that later I got more involved in that kind of care.

How Mistletoe Entered Integrative Oncology

Myself and I were going to go into mistletoe, you know, quite a bit in a moment. But yeah, explain to me the Anthroposophical. What is that? What is the kind of mindset and you know, what is that?

It's a small movement in a way that's done a lot. There's three large pharmacies around it in Europe and across the world. There are many hospitals and clinics in Europe.

But the main, I think, thing that separates anthroposophical integrative medicine from other modalities is its constant search to humanize medicine, to recognize that there is something of a higher spiritual nature to healing and health as well as scientific.

And I think kind of maybe similar to the old traditional medicines like Chinese medicine and Arab Vedic medicine, there's a deep constitutional and spiritual approach to healing, a way of looking at the human being that facilitates a more intuitive way of practicing that should be verifiable scientifically, but it takes a certain training to develop that sort of intuitive capacity to work with plants and different illness processes, minerals, nutrition, and how they relate to different, I would say, illness and health processes in the human being.

And I know mistletoe plays a role into that. And yeah, and regards to where it's grown, what type of tree and that will. And when it's harvested, there's a lot to it in regards to mistletoe than just, you know, here's mistletoe and, you know, take it and it will help you.

Yeah. There's a whole process of understanding which one to be the best for which individual and what state. And so it is really fascinating how those two come together.

And you mentioned that mistletoe is more commonly used in Europe. And that is almost like a care that is right along with traditional oncology. Was I hearing you right there?

Well, I wouldn't I don't think it'd be fair to say it's in every oncology center in Europe, but that there are whole hospitals and centers, several of them in Europe, that do bring those together.

And that's very unique. And so what? Tell me about mistletoe. What what it is and how that would benefit an individual battling cancer. Sure. First of all, mistletoe is such an unusual plant.

When people read about it, their eyes open up with a sense of wonder. You know, you have this almost ancient plant that's a parasitic plant. It grows on other trees and doesn't harm them.

And one of the most unique properties about mistletoe is that it blossoms and flowers in the winter time, not in the summer. And so it has its own unique rhythm.

You could say it's a strong individuality of its own. And if we think of that as a metaphor, before we get maybe more into the scientific side of it, that's a little bit how we sometimes look at and mistletoe from a holistic standpoint, it's strengthens the individual's capacity.

It makes the individual stronger in their immune capacity and the capacity of their body to recognize something like a tumor or something abnormal, and harness the immune system to become more active around it.

I guess you could say. I like to use the word immune surveillance is heightened by mistletoe. So it almost because a person dealing with cancer is obviously at a weak state.

And, you know, we think of the winter, you think of when things are very kind of the energy is low, and that's when it is the most powerful that that's when it's really blossomed.

So it's almost like that's when it steps in when the body is in a weak state. Yeah. The one of the beauties of using mistletoe is it can be used in all stages of cancer or all stages of an illness.

We may choose a different host tree tree in which the mistletoe is grown on. If we want to support more vitality, or if we want to be more aggressive immunologically, then we may choose a different tree.

But in general, patients feel better on mistletoe, and if they don't feel better or more resilient than before they took it, usually it means some type of subtle changes needed and the type of missile or the way it's given.

And how would a practitioner then choose what form you mentioned? You know, depending on where an individual's at in their journey. So what kind of trees are commonly used.

And you know, what do each tree bring to the qualities of mistletoe? Yeah, that's such a fascinating question. And it can be answered two ways.

Anthroposophical Medicine and Host Trees

It can be answered the way a traditional medicine practitioner might answer that question, and the way an academic, conventional scientific person might answer that question.

There's two sides. We know that when mistletoe is grown on different host trees and there are several oak, for instance, apple, ash tree, poplar trees, birch trees, hawthorn trees, there's several we could talk about.

But what we note is when we test the preparation, the extract, that there's different levels of the active constituents in those extracts from different host trees.

So through various studies over the years, we found that different types of mistletoe work better with certain types of cancer. Let's say a Molly Rowan on an apple tree.

Mistletoe grown on an apple tree might be better for reproductive organs, or Quercus, and oak tree might be better for digestive some digestive organs.

So in that sense, we could show that in studies, significant hospital studies, some of them with many, many patients, not all even small studies. And then there's the other side where maybe a homeopath or a traditional medicine practitioner, we look more to the constitutional aspect of the person.

How is their vitality? Have they been traumatized? Are they going through a depression? How is their overall health? What's their personality like? Are they a workaholic who does everything for everyone and nothing for themselves?

That would be a Quercus type person, for instance. Or is it a person who has given a lot to their children or is constantly, you know, in service of others but doesn't get the support that they need?

That might be more of an apple tree type person or a constitution. Of course, I'm being a bit simplistic here, but there's this kind of picture that you can form that relates to the host tree that we're using.

I would say practitioners who use it over a long time usually are turning to a bit of both how they look at it. And some practitioners are more comfortable with one approach than the other, but both exist and both are used around the world.

Yeah. And so you've you talked about mistletoe then can I increasing the vitality of the individual. What are some kind of scientific studies in regards to what mistletoe can, can do for an individual kind of immunology wise?

Yeah, I think there's two parts to your question, I think. But but correct me if I, if I didn't understand it correctly, the majority of the best studies on mistletoe are on quality of life.

So parameters like a vital energy appetite, sometimes less pain, improved mood, improve sleep. These qualitative aspects run alongside the mistletoe treatment for cancer or the disease we're using it for sometimes.

Now we're using it for other things like long Covid and things like that. And then there's, you know, also decide where mistletoe can be. The type of host tree we choose can be supportive to the vitality.

So for instance, if we use a pine mistletoe and someone who's very weak and depleted, maybe after chemotherapy, for instance, or has lost a lot of weight, then it can really help someone who's very weak, you know, poor appetite to build that back up as it's helping to help treat the disease.

And then maybe later on when they're stronger, we might use a stronger mistletoe. That has more, I would say active constituents that yeah, rev up the immune system towards the cancer such as lectins.

Right. Mistletoe lectins are the most common thing we study. And very high lectin preparations of mistletoe like a fraction which is an ash tree or Quercus, they tend to be an oak tree.

They tend to be very high in lectins. These we might use in a more aggressive tumor or a tumor that's metastasizing, things like that. Right. And maybe we might use something from a fur tree or a pine tree which has less lectins in it, but can still stimulate immune surveillance quite well.

Right. We might use that in a patient is a bit weaker. And and the higher lectin preparations also lead to more apoptosis in the tumors. They can weaken the cell wall of tumor cells.

They can help with genetic and DNA repair. There's many aspects to these mistletoe lectins. The list itself would take an hour to discuss. And then there's other constituents there too, like Vika toxins, which are like snake venoms or similar to steak venoms, antioxidants and other glycoproteins that we know are beneficial to cancer patients, both preventative and in treatment.

So it's quite a dynamic plant in that way. There's over 12 or 13 different pathways of immune regulation towards tumors that exist from the mistletoe plant.

Scientific Effects and Immune Support

And then we have that the topic of hyperthermia, you know, where, you know, you use fever and yeah, you trigger an immune response like a fever to support the body to kill off cancer cells.

And I know mistletoe can play a role in that process as well. Right. And some people get fevers. The different preparations as practitioners understand the different preparations of missile code better.

They sometimes can stimulate a fever. It's more difficult to stimulate fever, fevers in the modern patient, I think, than the patients. When mistletoe, the patients to whom it was first given to.

I think we can see the average temperature of the human being and modern civilization is coming down, and it's harder and harder to trigger a fever or a and many of our patients who have cancer, if you ask them, when's the last time you had a fabri illness, they'll say, I can't even remember.

But there are methods from which we can use the mistletoe to raise the temperature very mildly and gently. If we start slow and build it up, we might get a very small temperature increase of a few tenths of a degree.

And then there are techniques of advancing it quite rapidly, with both subcutaneous and IV at the same time, giving very high doses right from the start.

This might cause some strong skin reactions and a little discomfort at first, but no one's ever gotten very sick or died from mistletoe getting a fever.

And in those cases, some people get a little bit more of a fever. Temporary, just a few hours, and then it usually comes down. But a slight temperature increase is often associated with better outcomes.

But it depends on the patient, how fast you can do that and how much. And also the type of mistletoe we use. Is that helpful? I don't know if I fully answered your question. No.

That's perfect. You're doing great. So talk to me a little bit because, I mean a lot of people in their daily lives, it's like they become afraid of fevers and they try to do everything they can do to stop fevers in themselves and obviously children as well.

During childhood diseases. Talk a little bit about the benefit of fever overall. Not just cancer, but but overall. That's a great question. That would that would be a great topic for a whole conference in itself, I think, because that I personally believe and I think you can statistically observe, that the increase in chronic disease and our civilization is connected also with less fevers and less febrile illnesses.

If I think back to my first mentors who were primary care doctors, the most common things they saw were acute abdominal illnesses with high fever, scarlet fever with high fever, lots of stress, throat, all kinds of rashes.

We still see them, but nothing like we used to, you know, in young kids. And we're seeing the chronic illnesses that we expect in the 40s and 50s and 60 starting earlier and earlier and earlier in life.

And many of us believe it's because people don't have illnesses, they haven't strengthened their immune system and gone through the process of building up their antibodies right to different foreign invaders and infections and things like that, that strengthen the immune, the immune process in us that's connected with fever.

You could, if I could use one difficult word, it's saluda genic, which means saluda genesis means the origin of health. Whereas pathogenesis, the word we mostly use in modern medicine means the origin of illness.

So fever generates health, a healthy fever. I'm not going to say you let somebody get a fever of 105 and get a seizure and pneumonia. No, no no no. But to immediately suppress every small fever with tonal and Motrin may not be the best thing, because if a person is followed carefully and gets the right kind of supportive care and they have a few days of a mild to modest fever, they usually get through the illness more resilient than before.

So if you had a earache, your kids are much less likely to get a lot of Iraq's if they get through one on their own right, or we can become strengthened through a fever.

So what I'm trying to say, if it's in its proper place, is that a fair thing to say? Yeah, I really see that in my practice. And over the years, I think it's one of the most important questions that could be asked.

Who else that said, you know, give me a fever and I can cure anything? Yeah. I can't remember that. Yeah, yeah, I'm trying to remember, but yeah, I see the same thing.

Yeah. It's because the fever obviously that activates immune system. There's higher immune system involvement and greater antibody production. And also there's like a cleaning of house, you know, you burn up debris, you burn up viruses, you burn out pathogens.

And you know, they're able to their broken broken down and the immune system are able to kind of see these small components and then develop the appropriate antibodies.

And so it's a fantastic event for the training of the immune system. And like a spring cleaning you're correct. Absolutely correct. And that and I see the same thing.

One really short example I often like to give is if you're a parent and you can remember your children when they were young going through a fever, I noticed in my own children that often they would seem different.

After that fever, they might even look a little different and their color changes. And something seems to be, like you said, cleaned out and sort of reborn a little bit.

So in a healthy, controlled fever, you can see a strengthening and vital of the organism.

Fever, Hyperthermia, and Immune Training

But I think it's fair. We both have to say it has to be watched. We're not. One wouldn't want to say you let all fevers run rampant. That's not what's being said here.

Yeah, but a lot of the therapies, holistic therapies, lean on things like hyperthermia regards to cancer. So it is recognizing then a fever's importance in able to be able to control even something as advanced as cancer cells.

Absolutely. And there are studies right, with leukemia lymphomas where after a pneumonia with a high fever or a near septic reaction, there was a remission or reduction in the tumor burden.

So we've seen that. But how to control that is still a question. All these new immunotherapies are coming out. And mistletoe was actually the first immunotherapy.

You could say now we're trying to create new immunotherapy synthetically. And I think the verdict is still out on how well those are going to work. Yeah.

Yeah. And the power with using something herbal. Yeah. Mistletoe versus a chemical version is that it is complex and also work with the body's innate intelligence.

Yeah. So it's not going to regulate the body. It's always going to be supportive and leave the body stronger than it was before. Yes. I mean I just want to mention that is true.

99% of the time you can give too much mistletoe and make it cytotoxic. But if it's, you know, given in the right way, everything you say is, is true. And I think that's maybe magic's not the right word, but but one of the wonderful things about mistletoe is in medicine, and that it plays well with other therapies.

There are very few contraindications where you can't combine mistletoe with another nutritional, integrative or conventional treatment. There's very few situations where you can't use them together.

And over the last 80 years that mistletoe has been in existence. And of course, it's getting better and better every decade and more refined, and the production methods are better and better.

There's still only a handful of reactions ever reported over all those years with other medications. And so what are some of the kind of things to watch out for in regard to mistletoe?

That are there times that you should not do it? Are there concerns in regards to mistletoe? I mean, you mentioned 99.9. I mean, what what are some of the times that it may not be appropriate?

Yeah, there are definitely a few instances where you wouldn't want to give mistletoe or you'd have to wait. The most obvious would be an infection. If you have an acute infection with a fever, you don't give mistletoe at that time.

You wait till it's over so you wouldn't give it during a pneumonia or a bladder infection or sepsis or something like that, because we don't want to heighten the immune system, that's all, and make it overstimulated.

That would be a big mistake. So we stop it during that time. If someone's in an acute autoimmune phase, let's say with an acute colitis, hypothyroidism, acute flare of lupus, the way it regulates the immune system might heighten some aspects of that auto immune response.

So in those acute phases, we'd want to use it very judiciously, low dose or not at all, unless it was really under

control. And chronic phases where people are stable, we don't worry.

But that would be one of the main areas. And then allergy. And there's very few instances of allergy to mistletoe. If you studied more or trained in it, one would go more into that.

But there's very few metabolic conditions where you can't take mistletoe, but there are a few. And how is how is that usually administered? What is usually like what would a treatment protocol look like for people that are curious out there?

Yeah. The most common is sub Q, which is an injection like a insulin shot for a diabetic, very teeny tiny needle. You can use almost the smallest one you can get and you would inject it sub Q into the skin.

A lot of people want to know can we use it orally? You can use it orally, but there's still no study that shows that you get high enough lectin and vice toxin and other constituent levels to come close to the injection.

So maybe we would use that in a child or someone who absolutely couldn't take it. And then IV is the next most common intravenously, where quite high doses can be used of mistletoe much, much higher than subcutaneous.

And we usually use that in more acute phases of cancer or in early phases of treatment. And then in Europe, for instance, mistletoe is injected directly into tumors.

It's used for plaudits in the lungs with fluid or acids in the abdomen. Those kinds of things can't be done so much in the United States, because that usually has to be done in a hospital, but it's even been injected that way.

Yeah. In different other parts of the world. Mistletoe is growing a lot right now in East Asia and South America as well. Many, many doctors are starting to use it in clinics and those places almost more than Europe now.

And with the with the sub Q injection, is that a daily thing, is that you just do a certain dosage and you stick with that dosage. And how long of a treatment phase is it.

It's yeah. You ask that. So so sub Q I would say the average is three times a week.

Safety, Dosing, and Administration

That would be like an average amount of times mistletoe is given a week, whether it be IV or sub Q or combination. There are times where people have used it daily or every other day.

You have to be careful about how much you use for how long that way, but that's possible. And in cases where the cancer is in remission or we're using it more prophylactically than some people, just take it 1 or 2 times a week with pauses during the year to kind of support the immune system and kind of a rhythm.

So someone might take it a month on, a month off, or take it for a month and then take it for two weeks. Or if your long term in remission, maybe you just go through a cycle four times a year.

So there's many possibilities on the rhythm. But I would say three times a week is the most common. And how do you know what kind of dosage you to to do when you do sub Q you know, you just kind of start at a certain dose and, and think that that's right.

Or how how do you kind of approach a the appropriate dose. Yeah. Well, I couldn't teach a physician in this short time exactly how to do that, because the actual milligram amount that you would start with is quite different for the different brands of mistletoe.

There's several brands for main ones that are used in this country or in other countries too. And they have different lectin contents and they have different active constituent levels.

So let's say the most common one in this country is similar to what's called helix or in Europe. And that we can build up pretty fast. So you might start at one milligram and then your goal might be in a few weeks to get up to 50 or higher.

Milligrams could be though you react at 5 or 10mg and you have to stay there for several weeks, maybe even a couple months sometimes. So I would say it's a process of escalation.

Whichever type we use. Many of the mistletoe common escalation packs where it's escalating on its own and you're just sort of following that escalation along, and then when you get up to the right dose that you need, then we give a more consistent dose.

That's the same, right? But we go by the skin reaction. Usually we're looking, especially in the beginning for a little bit of a red dendritic reaction on the skin.

We usually want it a quarter size or smaller. If we're getting about that much reaction, that's a good dose. And as soon as that's reducing, we continue up, right.

If we want to push it more quickly, we might say a silver dollar, you know, or a red reaction like that. But we use that red reaction, especially in the beginning, to guide how fast we can escalate the dose.

That's the most common way we know. And then by how the patient feels, how they feel, do they feel healthy? Do these aspects of quality of life we discussed engage, right.

Do they do they they feel more vital in that way? Then we know we're doing it the right way. Usually if we're not, the patient doesn't feel good. They feel like they have a flu maybe.

Or you know, they're feeling a bit overburdened. Then we know we have to do it a little differently, but it still is never hurt somebody. I think there's two cases in 75 years.

Okay, okay. That's pretty safe medicine, considering I'm sure there's been millions of doses administered through this time. Yeah. And are there some stories?

I mean, and people always want to kind of here, you know, what are some things that you've seen, you know, with mistletoe, you know, where you've seen that this really impacted this individual.

And how did that turn out? Yeah, sure. I mean, of course with mistletoe. And cancer and any treatment we all know that can be a challenging disease. It can't cure everybody. Right.

And then yet wonderful things can also happen. If I were to choose one of my favorite cases, I would say it's one of those in between instances where I had a patient in stage for prostate cancer, I think I put this story in the book because he was one of my close, close patients, and he was just given a month or two to live.

It was already metastasized to bones and liver near the brain and the lungs. And he said, just keep me alive long enough to go visit these three churches of the Mother Mary he wanted to visit in Europe.

So we engaged him in integrative supportive treatment with mistletoe, sort of at the core. He made it to those three churches and he lived for six years, right in that instance with some spot radiation once or twice, you know, for a bone lesion.

But otherwise he wouldn't accept chemotherapy, which in that case has a very poor track record anyway for prostate metastasized stage for prostate cancer.

But not just the cancer getting better and holding back for that period of time. I think also to see how active he was, how vital he was, how his mood was, was strong.

And he he really had an extremely high quality of life with his wife and his children. And stories like that sometimes stick with me as much as a full remission, which is what we always want.

And we have any instances where mistletoe is part of that too. And yeah, but sometimes these kind of stories where you see the dignity and strength of a human being shine through you just don't ever forget that.

Oh, yeah. Those. And how much is that experience worth?

Patient Stories and Clinical Impact

I mean, to be able to to have those extra six years and to be able to achieve that goal in your life and then to be able to, you know, transition, you know, knowing that you've done that and, you know, feeling complete.

I mean, what a blessing. Yeah. And then and then we have cases where as part of an integrative modality, people of course gone into remission. And then there are some instances where it's either too far along or too aggressive at cancer, and mistletoe is not enough and something else is needed.

But for most cancers it can play a positive role, I would say. And you mentioned a little bit about injecting into the tumor and that obviously it's not done much here, United States but more in Europe.

What kind of benefit do they see there? Do they do that along with other type of therapies. And you know what happens? What kind of impact does it have on the tumor directly by injecting it.

Yeah, there's a few studies out there. Not a lot of internal injection. And it is done more in Europe. It's true. It's not approved to do it that way here.

So you have to do that sort of out of right, normal sort of FDA boundaries there and decide I'm just going to do it because my patients in late stage, you know, cancer or in a difficult situation, and then we are allowed to give those kind of treatments. Right.

And I think there are some tumors that let's say are locally difficult to move or the person can't have surgery for a certain reason, or a person can't take chemotherapy right away for a certain reason, reason.

And we can see a shrinkage, let's say, of a breast tumor or a merkel cell is one of the common ones. That's a rare tumor that's responded really well, you know, into tumor in the studies in Europe.

And then sub Q in preventing it from coming back. Lymph nodes sometimes, you know, or a localized lesion can respond sometimes to mistletoe and shrink significantly.

But I would say the doctors should be very well trained if they're going to do something like that. Yeah. And any anything else that you feel should really be covered in regards to mistletoe for our viewers, I think mistletoe symbolizes something that's very important.

You know, it really, I think, symbolizes where most of us who practice holistic and integrative medicine are trying to get. And that's to an understanding of this word I said earlier, saluted Genesis.

How do we activate the body's capacity to self heal to the maximum degree, you know, and mistletoe is not the only treatment that does that, but it very much embodies that in the sense that it can activate the immune system in a difficult situation like cancer, and still improve quality of life at the same time, when most of the medicines we would use in this case would make people feel sicker and less well.

And I think knowing mistletoe has been around for almost a hundred years now, in the last 20, 30 years we have over 100 new studies on it, research papers on mistletoe.

You know, I think it's a goal to shoot for. Why can't we have more medicines and more approaches like that? Not

trying to replace modern medicine. It has its place and it's needed.

But if we could reduce morbidities and make people feel better and cure illnesses with so much less side effects, and also the combinations of all these medicines, the side effects they create when they're combined together, I think mistletoe is a symbol of what's possible, and I don't mean that in a way to be rude to other approaches of healing, because that exists in other modalities as well.

But I think because just because it's cancer, you know, mistletoe kind of shines a little bit, you know, hey, this is possible even in this situation.

I think that part is special. Yeah. Well, thank you, Doctor Johnson. This this has been wonderful. And I appreciate the work you're doing, the education that you're bringing forth.

And yeah, thank you so much. I appreciate you having me on. And blessings. Thank you. Thank you.