Using Photomedicine For Mitochondrial Health, Cancer and Activation Of Immune System Transcript

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Introduction to Dr. Weber and Laser Medicine

– Well, Dr. Michael Weber, Thank you so much for for joining me at this segment of Regenerative Medicine Summit. I'm really excited to chat about something that I'm so passionate about and something that I'm using so heavily in my own clinic.

I'm excited to have you here. So I want people to kind of understand a little bit. You are the president of American Association of Medical laser Applications, also President of the International Society for Medical laser Applications Board, member of North American Association for laser therapy.

You have your revolutionizing the the photodynamic therapy for cancer using photo by modulation for regenerative medicine and also photodynamic therapy for so many other components as well in regards to especially with with Covid what was going on there, you know, and battling other type of infectious agents. And and I know you've also done a lot of research in regards to stem cell therapy and and how to really maximize that using photo by modulation or using laser light, you know.

So tell me a little bit about Yeah, because laser when we think about laser, we think about it as something that is destructive. We're cutting things with it. We are, you know, using laser and that way. So how can laser be used for the benefit of us health wise?

– No, you're right. When we think about laser first we think about surgery and and operation and cutting tissue operation, coagulation and something that's right, laser can be very strong light. That's right.

But laser is a special light now um laser is produced in so called laser diets before we made it in gas tubes. You know like helium neon laser. And there's a lot of research already done for more than 40, 50 years using laser light not only for destructive issues but also for healing. Because light is something what can heal the body. We know this now we are all made from light.

We have developed our body the whole world, everything what is living on the world is developed in light you know from the sunlight. And so the idea is because laser can be made in exactly the same colors like the sunlight.

How Low-Power Laser Supports Healing

And the wonderful thing is that laser is a light what we can use and introduced into the human body. So laser light can penetrate dependent from the wavelength through the skin and goes in the body.

But also we can bring laser light deeper in the body, may be in the bloodstream or somewhere else in the body in joints or anywhere else. And we have to distinguish when we speak about laser light between low power labor laser and high power laser and low power laser is a healing light. Like the sunlight is also healing light.

And when we are bringing this kind of light into the body, we can achieve really healing effect in the body. We can reduce pain. We can reduce muscle spasm that's general effect. But when we look a little bit deeper into the body on a cellular structures on mitochondria where we produce our light energy, then we can use this light to increase our life energy which is the end stabilize And can renew our body. So that's important that we know we have low power light what we use in our treatments and we are not using the high power laser.

Also high power laser is interesting for surgery for eye treatment and inventor issues. But important is low power laser up to 500 million watt. That's the main thing what we are using – And so in Regenerative Medicine, I mean you touched on something like the mitochondria.

Obviously the mitochondria is such a key component in in cellular repair and keeping the health self healthy and also making sure that they don't turn cancerous. So how what impact you mentioned light has can benefit the mitochondria. How does light support mitochondrial function?

Because we're used to thinking that it's just electrons that are being made moved through a chain and that relates to the hydrogen protons. You know how that kind of passes through a membrane and that creates a charge and that creates the energy.

So what role does light play in that? – You know, the processes going on in the mitochondria are quite complicated but I tried to to explain a little bit more. No easy for better understanding.

First of all, if we look at the mitochondria maybe a million years ago. The mitochondria were integrated in the other in you created cells so that we have like a self abusers. And the mitochondria like bacteria were integrated in ourselves. And they are now our factories to produce our life energy. Everybody knows it's the A. T. P.

The energy what we use immediately when we are running and jumping or something, you know and what also our brain and our heart has to use all the time.

So when we look a little bit deeper in the mitochondria, we find different enzyme complexes in the mitochondria where at the end the energy as A T. P. Is produced.

Yeah. And we have to we have to think about that all these these complexes in the mitochondria are produced and developed in the sun spectrum. So at the end we find the full sun spectrum when we regard this complexes as so called chroma force. That can take up light, you know, and can be stimulated by light. And we find the full sun spectrum in all these different chroma force in the mitochondria in the membrane.

And when we look at this oxidation process, how we develop our 80 p energy. We have the so called N. A. D. H. Which comes out from the glucose metabolism out of the cycle circle. And then this molecule is oxidized on different complexes. So the electrons are given like a waterfall from one complex to the next one and to the next one at the end they are transferred on oxygen and the development of water and this energy then from the electron oxidation is used to produce a T. P. So first of all we have to understand that this process can be stimulated by light. So if we give maybe blue light or yellow and green light or especially on the so called complex for we can stimulate with red and infrared that this is well investigated for many, many years.

We know exactly that we can stimulate a teepee sentences. And today we are not speaking anymore about only laser light therapy.

Mitochondria, ATP, and Photo Biomodulation

We're speaking about photo bio modulation because we can modulate this process and especially this complex for in the mitochondria because the development of the ATP is only one thing. You know, there are different other process.

What we induce. We produce some nitric oxide which is very important for different metabolic pathways, but also opens up the micro circulation. We produce smaller amounts of oxygen radicals and all together that will stimulate second messengers, which then can stimulate transcription factors.

And at the end of the nucleus and the DNA we can regenerate cells and at the end we can regenerate tissue. So that's the big thing what we can use with light to enhance this regenerative process.

– So it almost sounds like then the light, you know, is you're talking about the waterfall through the mitochondria that it just allows that waterfall to to run much stronger.

So instead of just a little trickle, we can just have a good flow of energy being produced. And then in addition to that, you know, just you know, we're talking about mitochondria in addition to that, you have all these other aspects,

you know that we are learning about how how light it is benefiting us like the nitric oxide.

You know, we know that that plays a huge role in anti aging, you know, because that can help in lengthening the telomeres, you know, which you know, telomeres, you know, is one of those things that you know, when they get shorter, we get older and then we get closer to dying.

So we want to keep them long in nitric oxide. Yeah, is so the light and benefits and nitric oxide production as well. – So the key is now when we're speaking about all these processes that we have to be able to bring the light everywhere to the body, not only let the light shining on the skin, of course this is working.

And up to a certain amount the light can penetrate a little bit into the body. But the key is and that's what we did in all these years to develop devices and methods to bring the light with all spectral colors everywhere to the body to achieve the healing effect. What we just talked about into the bloodstream because the blood brings the energy everywhere into joints in on a spine, on damaged nerves, Every everywhere is something damaged in the body, we have to bring the light for achieve this healing effect.

And one other thing, what you just mentioned, the telomeres, we just have some new data which are not yet published but showing on 10 or 20 patients. We just discussed it on our last conference in Bangkok some weeks ago that telemachus seems to be, can be even extended after intravenous laser therapy. That's something that is very, very interesting for the future.

– That's fascinating. So, and you to me it almost feels like you know, we should look upon light as a nutrient that we get deficient in. And because we are then deficient in certain components of the spectrum, we are then more more prone towards aging faster, more prone to degeneration of joints, tissue and then also disease and more prone to cancer.

So you're talking about how to more efficiently get that light into the system. And so I know and you know what we do and the technology that you've developed is to be able then to use a fiber optic needle that so you can then insert and then shine the light directly into the bloodstream, which to me is is just incredible. Instead of the other tools in the past where you had to bring blood outside and pass it through a machine that is shining on it.

But now we can do it in a sterile environment directly in the blood and treat the whole blood volume, you know using that technology. So how tell me a little bit how does that light?

You know, So we're shining it on the, into the bloodstream. How does that get transported them into different locations where it's needed? I mean because I think that is kind of a harder concept for people to understand.

– That is not such easy to understand. You know, you can regard light as electromagnetic wave and you can regard it as particles like we call them photons, you know, and it's not such easy that we give photons in the bloodstream and the blood carries the photons and deliver them to the heart or anywhere else in the body.

So there are different processes what we induce when we give light into into the bloodstream. Let us have a look on the different spectral colors. Know what we know quite well from a lot of research in the last 30, 40 years. So the best investigated one is the red laser because the red laser was the first available one about 40, 50 years ago. And most of the old research was done with red laser. And we know that red laser first of all stimulates the white blood cells which represent our immune system, lymphocytes, neutrophils micro function and everything.

So we have a stimulation of the immune system. We have effect what you can prove under the microscope on the Realogy of the blood. So the Petra site not sticky.

Such well together you know there's a much better fluid uh and they are more better. No more able to go through very tiny capillaries you know. So there is going to improve blood flow stimulation of the immune system from green laser green light.

Light, Nitric Oxide, and Bloodstream Delivery

We know that green will be bound by hemoglobin, the red color of the in the blood you know And from our ham molecule and we know that ham is able to pick up more oxygen so the oxygen ization oxygen.

Blood flow to the different organs is improved and the third one is the blue one and blue exactly supports everything what red and green doing Blue delivers more free nitric oxide because nitric oxide is something what we produce during walking in our blood vessel walls you know. But united oxide is bound to hemoglobin.

And we know from different subjects when you irrigate the nitric oxide hem complex with blue light immediately nitric oxide will come free and then opens up the micro circulation.

And the last one is the yellow one of the visible colors Yellow, we have not so many data but yellow is like more the sunshine in the blood. You know, it stimulates also has a huge anti inflammatory effect, huge anti depressive effect stimulates uh melatonin and serotonin also vitamin D.

So the interesting effect of yellow light and regarding UV light ultraviolet light, there's a long history. we know that ultraviolet light can kill viruses and bacteria in the bloodstream and also stimulates the immune system and last not least there's also infrared light and red and infrared light.

Together they stimulate the complex number for the metropole India. What we spoke about before with all these effects on the renewal of cells – And the different lights that we have also have the complex 12345 et cetera. Doesn't the different part of the spectrum I know with the red infrared on on the complex four doesn't the other lights in the spectrum than impact some of the other complexes to kind of stimulate that whole process. – Yeah we have some some data earlier data that blue light simulates a complex one. The natural sodium uh the sodium.

No this is in A. D. H. D. Is the first one, you know? And then we have the queen on in between you 10. And then we have the complex number three cytochrome c.

Red duct tape which is stimulated more with green and yellow light and the cytochrome C. Oxidase days number four by red and infrared light. So if we look at the whole spectrum and the mitochondria in the inner membrane we really find the sun spectrum there. And that makes it so interesting to bring this light into the body in different organs and joints and anywhere.

So that's the key of our therapy – And I know you've done a lot of research in regards to them. You know, stem cells and and combining that with laser light. So tell me a little bit about, because I know the first time that I did a radio show interview with you, you you had just had an individual with a shriveled up kidney.

You had done stem cell therapy on them and then stimulated them with photo by modulation with intravenous laser, external laser. And you had doctors flying in from all over the world.

And tell me a little bit about, you know, relive that story to me a little bit, because that was so fascinating to me. – Yes, stem cells is of course fascinating because it's the key, you know, for our future, maybe for better life, for longer life, for better quality of life. And there's so many publications done about stem cells. Sometimes it's working well, Sometimes it's not. So working well.

First of all, when we speak about stem cells, doesn't matter if we take them maybe from the bone marrow or from fatty tissue or somewhere else. We have to give them energy. When we give want to stimulate stem cells, we want them to grow to proliferate, We want them to to survive first.

You know, when we give them somewhere and they need energy for all this process. And then at the end we want them to differentiate maybe in new tissue of liver or kidney or catalog or something. So the key is today when we speak about stem cells, it's laser stimulated stem cell therapy.

So the next step is where we can get the stem cells from. Of course we can take them out of the bone marrow. We can prepare and re infuse them but it's not such a comfortable process to function the bone mirror with the thick needle and everything. Elegant method is to take them out of the fatty tissue because in the fatty tissue more stem

cells than in the bone marrow.

So many liposuction is quickly done and we have set up a new mechanical preparation with ultrasound only five minutes treatment to get them out of the tissue and clean them by filtration and central location.

Stem Cells and Laser-Enhanced Regeneration

And then there's so clean that we can inject them in joints or inject on the spine or even we can inject them intravenously subsequently, then stimulated with laser light to give the energy through their mitochondria. And we have seen already amazing results and joins on kidney failure on heart failure and even on brain with subsequent radiation of the brain with infrared light also in stroke patients in Parkinson Alzheimer's and other neurodegenerative disease. We have already seen amazing effects.

So that's something what is new in the moment. But something else I want to tell you in this context. We have also a new data from latest research when you only do some treatments of intravenous laser, you can already enhanced the amount of stem cells in the bloodstream about five times – About five.

So it increases it by five times – Exactly. Only by intravenous laser. – That's a phenomenal. So people because obviously it's a whole lot cheaper just to do intravenous laser than to get stem cell therapy all the time.

So people can just go to stimulate their own stem cells by five times. Just do an intravenous laser. – Yeah. – That's incredible. So tell me a little bit more in regards to we have this this science about photodynamic therapy. And how does that differ than photo bio modulation that you were talking about? The regenerative that supports the mitochondria supports nitric oxide production, anti aging. How?

Yeah, I just want to tell one story before we go. They're actually in regards to the kidney. So we had a stage five kidney patient that did not want to do dialysis. She was too too old and want to deal with it.

She'd rather die than have to deal with dialysis. So she came to me and and we did you know stem style I. D. And also did the photo by modulation, intravenous laser and hyperbaric ox in therapy along with it.

And she moved from stage five to stage three and she is still at stage three. Doing well. No need energy good kidney stable everything's fine. So it's really amazing what you can do with these type of therapies to with people dealing with kind of degenerative diseases and support the body to help to repair itself. – Yeah. And the key.

is the light. Yeah. The key is the laser light for stimulation of all these processes and keep them alive and and that's something what is missing in the literature in the last 40 years now, sometimes it's working, sometimes not. But if we are able to bring the light then in the joint or in the bloodstream everywhere where it's needed then we can achieve much better results – Because we have them people doing like prp platelet rich plasma where we inject growth factors and platelets. They have a lot of growth factors or we inject stem cells that obviously have other qualities to it in addition to all the growth factors but they are only as active. I mean the regeneration that takes place is only how as active as they are. So by bringing light into that there have been adding that will really then activate the stem cells to be much more efficient in the regeneration or the platelets to be much more effective with their growth factors to stimulate the regeneration of that area.

– Yeah. – So in regardless photodynamic therapy, yeah. What is that? And how is that different than the photo by modulation that you were talking about?

– Their first of all we have strongly to distinguish between photo therapy and photodynamic therapy. It seems to be the same thing but it's not now photo therapy is what we just discussed together we bring light into the body, into the system, into the organs, blood and anywhere else for stimulation.

We want to achieve healing effects with generative effect on the body. So this is a photo therapy. Photodynamic therapy is just the opposite. In this case we use the light not for healing purposes or regenerative. We just we use the light to kill something in the body but not the good cells. The bad cells.

Yeah so and we can speak about cancer cells and not only cancer is not limited to cancer. The other bad cells in the body can be bacteria, fungi, viruses and everything.

We can tweet with photodynamic therapy. So what is the difference in photodynamic therapy? We use a light sensitive substance. Yeah. I'll give you an example from the nature like chlorophyll. Yeah everybody knows chlorophyll or maybe the red hem of our blood. You know this is we can use this substances when we have to take iron out of the ham or magnesium out of the chlorophyll.

And then we can give it into the body. And these substances combined to cancer cells there are different mechanisms how they combined by different receptors and other special transport mechanisms so that they mainly go to cancer cells Or maybe to bacteria viruses. And then attached to these cells make the cells light sensitive and when we then irradiate um this complex of a cancer cell together with the the so called photo sensitizing like the chloroform er with red light which is according to the absorption spectrum of chlorophyll for we can stimulate the substance on a higher level and we can produce oxygen radicals which then can destroy the bad cells like cancer cells or bacteria.

So with photo therapy we are healing and regenerating all the good cells. And with photodynamic therapy we want to get rid of the bad cells in the body.

So that's the difference. So you see with light we can do two things which are normally completely different.

Photodynamic Therapy vs. Photo Biomodulation

– So it's so these photo sensitize Urz they are more apt to than attaching to like cancer cells or viruses or bacteria. So more of the negative things they tend to attach to And then by shining light you know so that that photo sensitize er will then means that they will pull more light to itself and make that agent or make that cancer cell more impacted by the light.

– You know photodynamic therapy has a long history that is nothing what we have invented in the last years. So this is done already for 30 40 years in many hospitals worldwide and it's an approved therapy you know so using derivatives from the chlorophyll. Ahem 11 name for example is photo frame which is an approved substance by FDA in the U. S. A. So this is an approved therapy.

And we know that it's working. We have not to discuss if it's working or not. We know that it's working. The only key is that it works normally only on the surface because all lasers which are used in the hospitals to stimulate these photos sensitizes work with red light and the penetration of red light is limited to one or maybe 1.5 centimeters.

Or the question is when somebody has a cancer deeper in the body like in stomach or in the pancreas or anywhere else. How can we bring enough light inside the body? And now I come with our new therapy what we discussed before we have needed the technology. We have fiber optic catheters.

What we can do maybe ultrasound guided and I my guided or something directly to close or inside the deeper in the body. And that's the key that photodynamic therapy is working that we can bring the light really deeper into the body where it is really needed.

And there's one more thing all the photos entities which are available normally on the market work with red light because there are derivatives from the so called buffering molecule buffering is the basic molecule of hem and flora for um Together with some good universities famous university in Germany we have developed so called nano Indo signing green which is a substance which is on the market even in the U.

S. For many years. And used for fluorescence diagnostic. And we have put them in so called my cells or liposomes that it can go deeper into the body in any cancer. And the the the interesting and important thing is that this is the first substance which can be stimulated by infrared light and infrared can penetrate much deeper into the body. And now we also have an access to bone metastases. So you can brain tumors.

So this is the development of the last years. And and I'm sure this is not the end I think especially in photodynamic therapy has a huge potential for cancer treatment in the next years. And it will not say we can treat and cure everybody with photon nobody can cure cancer with one single method. It's always an individualized therapy.

You know there are many things what we have to consider. But photodynamic therapy is a very very important part because it can not only destroy cancer cells. Same like chemotherapy but in the same step it can enhance our immune system. And that's the big difference to kIM or some of the similar methods.

– Yeah because the issue with chemo and is is that it um It hits the whole body meaning that it it affects affects the good cells in a bad way. And then the cancer cells as well. And then also you have the challenge of getting enough concentration of the chemo into the tumor to affect the tumor to trigger the oxidation there. So a lot of times the chemo you're doing is is only about 10% of that may reach the actual cancer.

So that becomes a challenge with the photodynamic therapy. We are then able to to target the bad cells, the cancer cells with negative effect. And then at the same time not have a negative effect on the healthy cells but actually do have a positive effect for regeneration and and prevent. And I would say prevent because you can't guarantee prevent but to reduce the risk for them becoming cancerous or diseased.

– I'm not I'm not completely against cancer therapy. You know, also cancer therapy in special cases can have a good effect. And sometimes it makes sense also to combine cancer maybe with photodynamic therapy.

So I will not claim only use photodynamic. So there are many other methods in conventional medicine what we need as well, you know. So, but for dynamic therapy can be a very, very important part because we know with chemo alone mostly we cannot of course we can get people better maybe in a remission but mostly we cannot cure them.

No curing patients with chemo alone or other method. We know this is less than five or 10%. So the PDT is 11 important part and does not exclude other therapies. That's important to emphasize this – And I agree, you know, they play a role and our because chemo in itself have not produced the results that we would like that means that we need to figure out how to combine that and how to bring other type of therapies and layer things because cancer is a complex disease. And we need to figure out how to maximize the treatment to have the best kind of an effect.

So one of the fascinating things is that the combination that if a person chooses to do chemo with photodynamic therapy, you can actually then increase the effectiveness of some key moe's as well correct – And maybe reduce also the amount of chemo not going maybe to a lower dose of chemo when you combine with photodynamic therapy. So you will not have this big negative effect on the immune system. And so this is also another option.

– So what have you seen? Yeah, because you you you are I mean the leader, I would say the leader in the world in regards to bringing laser technology into the integrative space, you know, in both regenerative medicine and also cancer type of therapies. And even, you know, during the pandemic, you did research there as well and the impact on the covid virus.

So what have you seen and you know, the cancer patients that you've dealt with and then also some of the other fascinating you know cases that that you've seen the impact.

– Yeah, it is always a little bit difficult to say because cancer patients are all different, you know this and you know, you know from your own work.

No and patients different cancers are different. These stages are different. So I think we have to to look at the key the key things what we need for successful photodynamic therapy. One key is a good photosensitive visor.

And as a big step forward was the development of an innocent in green, you know, additional to the available covering photo sensitize. There's something what is new. I don't know if I told you already, what we are working in the moment is a minor level clinic acid.

A minnow level in acid is a natural amino amino acid, you know, in our metabolism. But it is used for a long time as a cream. For skin cancer, basil, UMA basil cell carcinoma, keratosis for for successful treatment. Because when you put it on a keratosis area or basal cell cancer after some hours it will be integrated in the cell.

And then you can irrigate with red light and you will destroy the oxygen radicals and what we learned now. And what is quite new that this amino level in it is not available as a drinking solution. Yeah.

So you can drink it, it will go it will bind quite specifically to tumor cells because we know there are special trans transporter systems. There's research about this and then the endo genic.

I mean the level indicates that what we produce in ourselves and the explosion what we are drinking will will be set up in special puffery molecules. And at the end is the so called protocol free number nine which then will accumulate and makes this small substance to a photo sensitize er And then we can irradiate with red light and and with blue light we can even make fluorescence diagnostics so we can even see how big the tumor is. And if it's working or not something what the neurosurgeons doing a lot long time already on the open brain now when they looking for brain tumor. So that's something that's something new.

But anyway, if you ask me about the success. First of all the good photos sensitize er second enough oxygen. Yeah, tumors often have not much oxygen. They can live without oxygen. You know this now and they can metabolize glucose also without oxygen.

And how can we bring more oxygen in the body, breathe oxygen. Hyperbaric chamber is a good method. Or we have a new method mixing hyaluronic acid with peroxide. This will bind together and we can inject inject inter to morally and this would deliver oxygen inside the tumor.

Yeah. And then the right photo sensitize er the right amount of oxygen. And of course the key the right laser, the right wavelength with the right power and being able to bring really the light deeply enough in the body. I give you 11 example what is also known approved therapy even in Germany for two dynamic therapy of prostate cancer is now officially approved. So you give photos, sensitize it will accumulate in the prostate.

We can give circular irradiating fiber optics in the your ETRA to irrigate from inside and ultrasound guided. We can put some small fiber optic needles from the polonium to the prostate on the capsule and then do this treatment.

And the results are amazing what we are achieving now in the moment. But anyway we have always to make sure rightful to sensitize enough oxygen and get enough laser where it is needed – and with this and like you mentioned, you know each each person is different. Each cancer is different.

Cancer Applications and Clinical Outcomes

You know each stage is different. Obviously there there's nothing that will we haven't cured cancer yet, you know. So there there's nothing we haven't solved that riddle. And that's what we're all working on trying to get better at at doing that. But what are some of the outcomes that you have seen using bringing photodynamic therapy and the cancer cases that otherwise would have been, you know medically are not possible to treat? I mean, have you seen a change in some of these people or no?

– Yeah, I think so. So you know, if somebody has a small tumor normally they go to surgery may be in the breast cancer. They will be operated. So normally we don't see this kind of patients mostly they come to us and they have maybe metastases already in different organs, liver or bones or somewhere else. And I think what we have seen is first of all is the improvement of quality of life.

You know the patients feel better and um that's the difference to chemo. You know with chemo maybe also you can bring the tumor down but you will reduce also the quality of life.

And I have a lot of patients. I will not say we can get all these metastases also of the body but we can keep them stable, you know and we we we improve the quality that people can eat better. They can start making sports or

something.

And in general in general we have seen quite good results. However, it is always a question of time now if somebody comes too late and they have done everything already including different chemo and radiation and everything sometimes that you know that there is a point of I call the point of no return and the immune system and the body is too weak to achieve any positive effect. But when patients still uh in a in a good general condition and motivated uh I think we we have a we have a good chance but it is too much to to to claim we have a therapy, we can cure everybody. But when I look sometimes on the development of new drugs from chemo of immune drugs and then or this is now approved from FDA. Because in studies we could see three months longer life or so on and then it's going on the market.

So when we see maybe a year longer life with a good quality is a lot what we can achieve. – Yeah, I know in my own practice you know having having patients coming in with likely glioblastoma and not being able to pick things off the floor and not not functional in any way.

And then after even a week therapy using a week they're meeting for a week time using photodynamic therapy with other things as well. They're able actually after the first day able to pick things off the floor, you know, grab things hold onto things and then living, you know, she did she still succumbed to glioblastoma. But she was able to enjoy a year plus of of just hiking in the hills with her husband and having a wonderful year instead of dying sooner and and not having that quality of life that additional year.

So yeah, so that it's fantastic you know, adding that quality of life and and you know, to be able to do that. I'm curious with. Yes a lot of people and I tell my patients this as well, you know to not become more specific, you know because cancer is a systemic disease.

But have you seen them using these this photodynamic therapy, photo sensitize er making sure there's oxygen In the tumor and then also then exposing it to strong enough laser. Have you seen these tumors and shrink and go away or what what have you seen there? – Yeah it depends.

So for example we have very good results in lung cancer patients because the lung is 90% air you know there's a lot of oxygen inside. And especially with Lankan's. I have several cases from the last month from this year but also from before with humor. 34 centimeters which is which were really drinking a lot. And patients have a lot of improvement.

Can do sports can travel again. So especially in long we have very very good results. Also bladder cancer bladder cancer when it's not too deep into the infiltrator in the muscle has a very good very good results because we can give photo sensitize orally or injecting but also we can inject inside the bladder and can let it work there. So results in bladder cancer in prostate cancer and lung cancer are quite good.

And also breast cancer. Normally we have good results. And and if you can bring really the the the photo sensitizing maybe by injection or also the laser ultrasound garden. And mostly it's not difficult in the breast because it's easy to see the ultras on you can really see shrinking in ultrasound. You can see mostly after some days that the solid tissue becomes black. That means that cells are destroyed and you can induce cystic structures. Now what is a sign of self destruction?

So you can really prove it quickly with the good ultrasound device. So there's still some cancers which are difficult. I speak about pancreatic cancer. Now we did a lot of things we have patients we could keep alive for two or three years but still very difficult especially when it's metastasized inside the peritoneum with petroleum resources then the situation is more difficult. But if patients will not come too late I think the chance is not bad. – Yeah. And their ways to then because people then come just like myself they come to my my center or they come to where you're at and get the treatments and and then obviously when they leave they still want to benefit from doing laser therapy because so you developed. I know because of that issue you develop technology to be able to so people can benefit you know keep benefiting because in addition to the anti aging effect like we're talking about the mitochondria you also then can utilize then the photodynamic aspect if you're dealing with cancer or dealing with infections as as well.

So so tell me a little bit about some of this technology that you developed and how people can use it – When we are done with our treatment. And the patient goes home they always ask me what what can I do in the house for follow up treatment now and all my patients take also called laser watch at home I think you know this we have a nice, it looks like a watch but on the backside there are different diets which bring the bloodstream the laser energy directly into the bloodstream.

It's a noninvasive, noninvasive radiation of the blood. And especially you know, we combine this normally with special natural substances like you mean chlorophyll in water soluble chlorophyll, reliable flavin hyper scene from ST john's wort plants, you know, they're all for two dynamic active substances and when we look at patients sometimes they're fine. But two years later they get metastases suddenly. So because they still have circulating human cells and maybe stem cells in the bloodstream.

And I always tell this, first of all, it gives energy in the blood is similar like intravenous it stimulates all these different supplements, so to clean the blood um and that's our common treatment. That's something also what we do ourselves every day because it gives us energy stimulates the immune system and and gives power at the end, you know and something for prevention also that we will not get sick ourselves.

So that's the so called laser watch. And I'm working together with my son Robert, you know him and just and someone to go. He has developed a new model which is even seven times stronger than the one what we had before and for brain issues, we have to develop special helmet, you know with infrared light which can bring the light into the brain.

Home Devices, Infection Control, and Prevention

So I use this like to use it in patients with brain cancer, glioblastoma or something very often we have all sorts Children you know. And so the helmet is helpful on the other hand also we use the helmet of course for regenerative issues after stroke and all these neurodegenerative diseases. So this is a lot of nice equipment what we use for patients after this. Also we have a so called laser pets, you know with red infrared light, what the patient can put on the breast or maybe on the liver or something. So there's a lot of different equipment what can be used later as home from patients, they like it – And I was looking for my watch, I thought it had had it right here that the newest version and I love it and it's something because so many of us were talking about sunshine and how important that is for our health and a lot of us are are not out in the sun that much, you know, we live mostly inside, we work inside and so we become deficient in these different parts of the spectrum, you know like you're talking about the yellow light, you know, helping with, you know, that's what makes us happy, you know, it helps us produce serotonin vitamin D.

And all these kind of things and you know, red light to stimulate our immune system and blue light to stimulate production of nitric oxide and and also kill infectious agents and ultraviolet to kill off infectious agents. So we have and you know, they're anti inflammatory and regenerative and so to be able to have a tool that we can then continually support that and then you know what I do and you know, that's what I tell my patients, you know, you just put it inside so that you know, as the blood passes by here. You know, you're shining that because it's you know, the blood is just very close to her. You're shining that directly onto your blood and that energy, you know through them that kind of electromagnetic, you know that that frequency which you know, you look at light is either frequency or photon, you know, so you know that frequency then gets transported throughout your whole body and really revital in your body and then as a an immune system support and to use the photo sensitize er to to attach to these cancer cells or pathogens and then you treat them as they're passing by here. I mean to me that that that that should be standard of care almost. You know, that's the best kind of health insurance and that I – Yeah, especially now okay, the pandemic is mostly gone in the moment. But now we have big problem with the flu influenza now in Germany we have millions of people with high fever.

And the watch is a fantastic instrument also to kill pathogens like viruses. And remember our studies what we did with the covid 19 wonderful photo sensitize er in this case is a simple vitamin, vitamin B two riboflavin but the body needs anyway so you can take this vitamin it will is well absorbed and goes in your bloodstream.

And when you stimulate this with your watch, especially with the blue light. You can clean first of all the blood from

pathogens and when it's then infection maybe in the respiratory truck in the north and starts mostly nose and mouth, you know with sore throat and and rises and everything.

You can spray this in in the north and mouth and then we have special adapters. What you can put on the watch with UV a light and blue light and within minutes you can kill all these viruses. And this is well proven in in America.

We have devices in the hospitals where they put the blood bags, you know with a little bit riboflavin, five minutes in the U. V. Device and then they're clean from HIV from apart itis from everything so we know that it's working and we made nice studies and published this last year in America with total 140 patients.

No and and you ask me how this is working. Well today we know that we know the mechanism the vitamin B. To the riboflavin binds immediately to the D. N. A. Or RNA chain to the goon in is one of the part of the chain. And when you irrigate it then with the right light boom the the the the D. N. A chain will explode and will be broken on 1000 places and so you can kill these viruses within minutes.

So that's a fantastic it's not only for cancers only one side but you know many patients still die from infections you know. Look robot. My son made the research in malaria also with riboflavin still 100,000 die from malaria and every time it's something new and we don't know what happens in the future when the next pandemic will come.

– And so did he see then the positive outcome in regard to malaria with the studies that he was doing Robert. – Yeah. they had an outcome after one or two treatments of 90% success rate was similar like this study with with the COVID-19. So when we measured the viral load you know and within two or three days it was really quite normal.

So what amazing results. So we should not only think about cancer. This is of course very important of course but still all these infections which affects ourselves when we get it. You know and we can be very sick from the flu for several weeks. You know this and still some 1000 people die from this even in Germany or in your country and I think also this is a quite important field of photodynamic therapy.

– Yeah I agree. And there's so many different chronic infections that people are suffering from like Epstein barr, cytomegalovirus you have you know lyme disease – Lyme disease is a great problem in us.

I know. Yeah – Yeah so to to bring this type of therapy obviously you know you each person is different and you need to personalize the care but it this becomes a good core component which it is in my my clinic to to really address some very complex conditions and to help people that haven't been able to get help in other ways. Any anything else that you feel is important for people to understand in regards to photo by modulation photodynamic you know you have you have ways you know people can then come to you either send like yours or mine and there are other centers as well that that offer some of these things therapies.

There aren't as many as we would like because it is still a very cutting edge type of therapy and then also they can bring this technology home then utilizing things like the watch the helmet and the attachment then to the watch and anything else that you feel is important that people should know in regard to this, that that can really benefit them. – Yeah I think we we should try that.

People can can understand what we're speaking about in an easy way. You know we can make it very complicated you know and you can write complicate books about this but the message normally is very easy. Everybody will understand when I tell my patients, you know, we all made from light. Everything in our body and especially every cell in our body is made from light and is light sensitive.

And if we are able to bring the light everywhere in the body and we can then use this light to stimulate our energy like this A. T. P. And the energy will stimulate our organ function and of course has an yeah there is no better anti aging effect like this. No so to explain this to patients.

No light first of all is something what we generate, what makes life new again and we can bring it of course in the bloodstream, we can bring it with the helmet in the brain and the watches of course most attractive because everybody likes it and want to have it once people have it one time, they will never give it back.

You know and it is a little bit more difficult when we speak about cancer patients. But also I think it's not such difficult also for me it's so amazing we use natural substances you know like the chlorophyll, you know like from our hands, this kind of molecules we use natural substances in the body with natural light to kill cancer. This is the idea itself is fantastic now.

And I think it's easy to to explain to patients to understand this and therefore I think we have to bring a well understand good understanding message to the patient know and explain it in the right way.

Then Patients will believe it and believe in our therapy anyway is 50% of the healing now when you treat a cancer patient when they trust you and of course so important.

– Yeah and then they in the old days you know they used to do you know build temples, you know for helio therapy, you know using sunlight to heal heal cancer and heal disease.

And so they want to be closer to the sun and then people have strong exposure to the sun than to heal disease. And here we would technology we're able to bring that into the blood stream, you know, the spectrum of of the sun using you know diodes, you know, using both ways of bringing like yellow light into the bloodstream or green light and blue light, you know, things that haven't been done before, you know, ultra violet and red we've had but these other other type parts of the spectrum to kind of bring more of a full sunlight into the bloodstream directly is kind of the it's the technology that you that you developed and for people to understand also that this is not this is a heavily research subject. I mean I just kind of looking through, I have your book, you know that it's a thick book, a lot of information and also Dr. you know Professor Michael Hamblin, you know, his stick photo photo medicine book.

And it's in all different conditions and huge amount of research in this area. So it's not like it's some far fringe, you know, something that has not been researched, it's heavily researched, heavily beneficial and and it's just that people don't recognize the importance of it and then having tools that they can be effectively implemented, you know, and that is what you're helping to bring to the market and that it's also exciting. – Okay, – Great. Well, Dr. Weber thank you so much for spending this time and for explaining this this tremendous type of therapy. Thank you so much for everything that you're doing in this field. – And thank you to, you know, for the nice conversation. – Thank you