“Evaluating Complementary Therapies in Cancer Care” (Martin Lužbeták, MD, MS) [#108]

Brad Power
August 7, 2024

“This is my philosophy: What is the need of my patients? If they come to me and they say, ‘I will be getting chemotherapy, and I want to know which natural substance or repurposed drug or other chemo I should take with it.’ I say, ‘Good. This is our defined question. You get chemo with platinum, cisplatin, or carboplatin, and you want to know if you should take curcumin or cannabidiol with it. Okay. We have to test it.’” – Martin Lužbeták

“I never fly blind. I never trust anything. I never use one single method. I go for CTCs. I go for tumor markers. I go for radiation. I always want to know what's going on, and if I have a slight feeling it's not going in my direction, I test. I go for an MRI. I go for a PET CT every month. It matters, because if I fly blind, and I fly to the wrong destination, I can't turn around. Time goes in just one direction. If we miss the opportunity, we can’t go back. I just want to be as effective as I can and as I have to, because this is a hard road.” – Martin Lužbeták

“Every patient needs something slightly different, because his cancer type is different, his stage is different, his immune system is different, and so on. The more diagnostics we can do, it will make our work better. You need to do it for every supplement, for everything you do. You need to think, ‘Why am I doing this?’, for every supplement, every vitamin, every probiotic, for everything.” – Martin Lužbeták

Meeting Summary

Advanced cancer patients and caregivers are motivated to leave no stone unturned in searching for ways to treat their disease. They may want to know what other combinations of therapies might complement their primary treatment (often chemotherapy, radiation, surgery, or immunotherapy). The heart of complementary oncology is to add something else to the standard treatments, like selenium, vitamin D, omega-3 fatty acids, probiotics, and so on. This pursuit can lead patients and caregivers to find treatments that are not (yet) sanctioned by clinical standards, and they can run headlong into concerns about personalized therapy combinations which have not been tested in randomized clinical trials.

How should you evaluate non-standard complementary treatments?

Dr. Martin Lužbeták, MD, MS, is uniquely positioned to integrate advanced diagnostic testing with clinical care, particularly in the realm of complementary therapies. He operates a specialized molecular diagnostics lab in Düsseldorf and maintains a medical practice in Vienna. Trained in general medicine, his early career was shaped by a keen interest in alternative and preventive medicine. Initially focusing on surgery and internal medicine, he later transitioned into complementary oncology, working with treatments such as selenium and vitamin D. In 2018, he established his Vienna practice, dedicated to complementary medicine, recognizing a significant and growing demand for high-quality care in this field. When his colleague and partner in Düsseldorf passed away in 2020, leaving no successor, Dr. Lužbeták took over leadership of

the lab, preventing its closure. Since 2021, he has led both his practice and the lab, leveraging his expertise in diagnostics and the application of results—an endeavor that is both challenging and rewarding.

What are the challenges in making decisions about complementary therapies?

Evaluating complementary therapies can be challenging, especially when it comes to determining the credibility of those providing recommendations. The evidence supporting these therapies is often limited, and while some practitioners are highly knowledgeable, many lack sufficient expertise. The landscape can be confusing, with a wide range of unproven or unreliable options.

What are some complementary therapies you should consider?

- **Targeted vitamins:** Don’t take a multivitamin; choose specific vitamins for specific purposes.
- **Selenium**: Most people are deficient in selenium. It’s harder to get selenium from your diet than other nutrients, like zinc. High dose selenium infusions can prevent the side effects of chemo and are good with immunotherapies.
- **Omega-3 fatty acids:** If you have a lot of inflammation in your tumor, you can lower the inflammation with omegas, and your immunotherapy is going to work better.
- **Intravenous high-dose vitamin C:** Intravenous vitamin C does not have enough evidence to say it's cancer killing, but it has evidence for reducing the side effects of chemo. If you want to know if vitamin C is enhancing the effects of your chemo, try it in the lab first on circulating tumor cells, and then go for very, very high doses of vitamin C. The side effects are very low. It can have good effects on immunotherapy, because your immune cells need vitamin C. Oral vitamin C doesn’t work.
- **Fasting**: To reduce chemotherapy side effects, fast a day before, on the day of, and a day after chemo.

How can you increase your confidence in the effectiveness of complementary therapies?

- **Lean into testing**: Frequent testing is crucial in evaluating the clinical impact of therapies, and especially in managing the complexity of therapy combinations. Use multiple testing methods: liquid biopsies, different kinds of scans. For vitamin D, selenium, zinc, and omega-3 acids, measure, apply, then measure, to tune dosing and monitor effectiveness. Base all your decisions on diagnostics. If you have good diagnostics, you will have good therapy and good results.
- **Get blood tests:** If you need a short timeframe, and you have defined questions, get blood tests. The information you will get will be less than from tissue. Every year they are coming out with more and more blood-based diagnostics.
- **Get tissue tests:** If you have a lot of questions and a big problem, go for tissue tests.
- **Find a doctor you can trust** based on the experience of their patients with their recommendations.

How can you learn more about complementary therapies?

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- See the notes, transcript, and recording from our discussions about complementary therapies with Mark Taylor and Gabriele Gavazzi; Nasha Winters; Donald Abrams; and Bapcha Murthy.
- Contact Martin Lužbeták at drluzbetak@medvienna.at.

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Meeting Notes

KEYWORDS

patients, chemo, diagnostics, lab, treatment, work, cancer, physicians, selenium, zinc, blood, question, measure, zinc deficiency, oncology, fasting, test, mutation, supplement, tissue

SPEAKERS

Martin Lužbeták (69%), Brad Power (17%), Robb Owen (9%), Brian McCloskey (3%), Chad Magnussen (2%), Roger Royse (1%)

CHAT CONTRIBUTORS

Allen Morris, Stratis Telloglou, Noel Resch

SUMMARY

The conversation centered around personalized cancer treatment, emphasizing the importance of tailoring therapies to individual patients through a combination of conventional and complementary therapies and extensive testing. Evaluating and choosing reliable treatment centers is challenging. There are potential benefits of omega-3 supplementation, vitamin C in immunotherapy, and selenium supplementation for cancer treatment. You need complete diagnostics and tailored supplementation to minimize side effects and maximize efficacy.

OUTLINE

Introducing Martin Lužbeták: complementary cancer treatment options and diagnostics with a focus on complementary therapies.

- Martin Lužbeták, MD, discusses complementary therapies for cancer patients in Austria and Germany.
- He is a passionate doctor who combines conventional and complementary treatments for personalized medicine approaches in cancer treatment, using diagnostics to determine the best treatment for each patient.
- You should test natural substances and drugs with chemotherapy to identify potential synergies or conflicts.

Evaluating cancer treatment centers, patient network, and cost.

- Dr. Lužbeták emphasizes referring patients to colleagues with a track record of success and a compassionate bedside manner.
- Collaborating with patient networks can be invaluable in discovering effective cancer treatment options.
- Given the complexity of cancer, clear communication with physicians about your specific needs is essential.

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- Some therapies can cost between 30,000 and 40,000 euros, making trial-and-error approaches financially challenging for many European patients. Thorough testing can help identify the most promising and cost-effective treatment options, minimizing unnecessary expenses.
- Dr. Lužbeták is dedicated to finding treatments that are both effective and affordable, ensuring that patients receive high-quality care without being burdened by excessive costs.

Cancer diagnostics and treatment options, including blood vs. tissue testing, whole genome sequencing, and the importance of personalized medicine.

- Patients should prioritize tissue-based diagnostics for personalized treatment guidance.
- Dr. Lužbeták recommends balancing diagnostic testing and therapy costs for optimal care.
- Omega-3 fatty acids in cancer treatment may reduce inflammation and enhance immunotherapy.
- High-dose vitamin C intravenously may reduce chemotherapy side effects.

Cancer diagnosis and treatment options, including CTCs and DNA testing.

- Roger Royse questions the accuracy of CTC tests from different companies due to varying techniques and results.
- Martin Lužbeták mentioned that CTCs are living cells that can be used to measure cancer prognosis, and their cost can range from $500 to $1,000.
- He also mentioned that cfDNA testing is expensive, costing around $3,000 to $5,000, and is mainly used for patients with known metastasis or drug over mutations.
- He discusses affordable diagnostic options for cancer patients, including whole exome and transcriptomic analysis.
- He highlights the importance of understanding treatment options and their methods of action for effective cancer management.

Zinc and selenium deficiencies in cancer treatment.

- Robb Owen, a patient with stage 4 head and neck cancer, reversed tumor growth through dietary changes and supplements.
- Martin Lužbeták notes high selenium deficiency in patients, rare zinc deficiency, and P53 mutation prevalence.
- Robb Owen discusses zinc supplementation's potential to arrest squamous cell carcinoma tumor growth, while Martin Lužbeták cautions against excessive supplementation.

Cancer treatment strategies, including metabolic approach, diagnostics, and scans.

- Martin Lužbeták emphasizes the importance of personalized approach to cancer treatment, considering individual patient characteristics and cancer type.
- He disagrees with the advice to avoid antioxidants during chemotherapy, citing a lack of understanding of how chemo works and generates side effects.
- He recommends testing for cancer markers every 3 months after chemo to monitor effectiveness.

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- He discusses using various methods to diagnose and treat cancer, including scans, tumor markers, and radiation.
- He prioritizes being as effective as possible and avoiding fear of testing.

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TRANSCRIPT

Brad Power

This is the Cancer Patient Lab.

We're honored to have Martin Lužbeták with us to talk about his practice. I was introduced to Martin by Mark Taylor, who had a session with us. He's a role model for us of being a super patient. Mark has looked at many clinics around the world and different treatments and come up with some conclusions. I recommend that you look at the session we had with him to get more background on that. He's very much a proponent of complementary therapies, and he's writing a book that will hopefully be coming out soon.

He introduced me to Martin, and Martin has two roles, as he'll explain, one as a doctor advising people in Vienna on a variety of treatments, and he also has a lab in Germany, which he will explain how he ended up being the leader of that lab in order to guide patients in their care.

This is for information purposes only. This is not medical advice. We provide information to patients so they can take it to their medical team.

We are a patient-led community, all volunteers, and would appreciate any donations that you might make, which you can do through our website.

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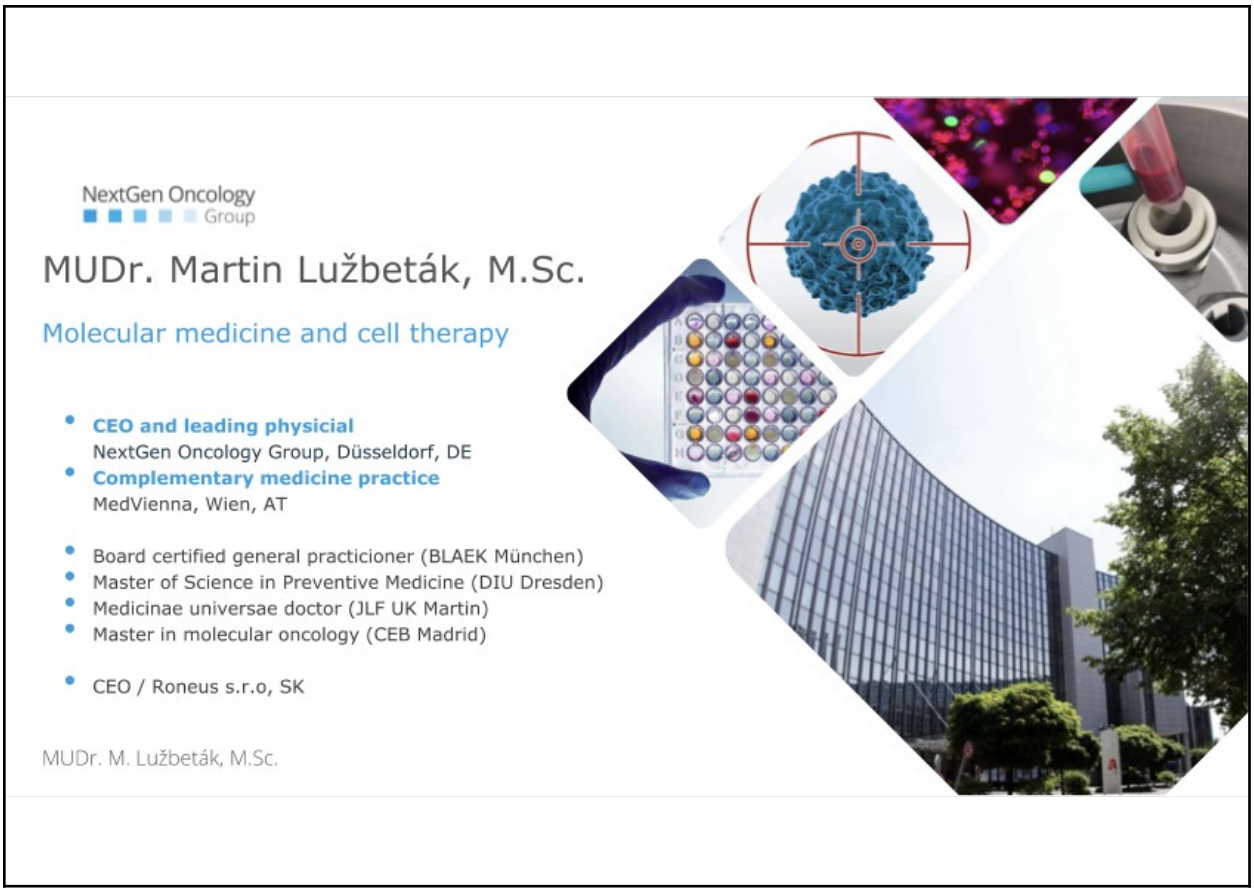

Martin Lužbeták 2:05
I'm a physician. I'm glad to be here. I love to talk to patients. That's why I still have a practice in Vienna, where I'm practicing complementary medicine. I have a lab. I love the cells. I love the pathways. I love the genes. I try to combine it, and it's not very easy.

To tell you where I'm coming from, who I am, maybe you imagine a quest for efficacy, because it's going to be true my whole life. I've studied medicine. I started studying exactly 20 years ago in Slovakia. My first thesis, for a small seminary thesis I wrote, was on TP53, one of the most common mutations. I immediately fell in love with molecular biology and molecular oncology. So through all my studies at the university, I was thinking, “I'm going to be an oncologist,” because I wanted to treat cancer patients.

But at the end of it, I decided that I wanted to have more efficacy in treatment. So I tried to be a surgeon. After university, I started my career in a surgical unit in Germany because I spoke very good German, much better than my English now, and I worked there for four years.

Parallel to it, I started my Master of Science in preventive medicine, because I found out that maybe prevention is even more efficient in preventing disease than treatment. This was my way out of surgery, and I started my internal board certification on complementary oncology. It was a

hospital which had a station where we treated oncological patients with chemo and radiation, but we gave natural substances to it.

That's the heart of complementary oncology, that you complement the standard care with something else, like selenium, vitamin D, omega three fatty acids, maybe multivitamins, probiotics, and so on.

I learned complementary oncology at its heart. I'm deeply thankful for my former boss, Peter Holzhauer, an oncologist like you've never seen before, with his heart for patients. Then I had to finish my board certification as a general practitioner, which opened my way into private practice, which I opened in 2018 in Vienna, because it's closer to Slovakia, where I come from.

I started practicing there and had a deep and very good cooperation with Professor Bojar, who had a lab for molecular oncology in Germany, in Dusseldorf. He died, unfortunately, in 2020. I took over the lab, and since then, I have had two jobs. I care for my patients in Vienna, and I care for my people in the lab, and we do good diagnostics. I try to be more effective, and now I have to double myself and be twice as effective. It's an awesome job, because I see the results from the lab, and I can translate it into the care for my patients. I immediately see if my efficacy is good or not good enough.

I have great cooperation with other physicians, like-minded physicians in Germany and Austria, where we work, so to say, in a network of physicians who really try to live complementary medicine. Always the standard of care, if possible, plus the complementary therapies.

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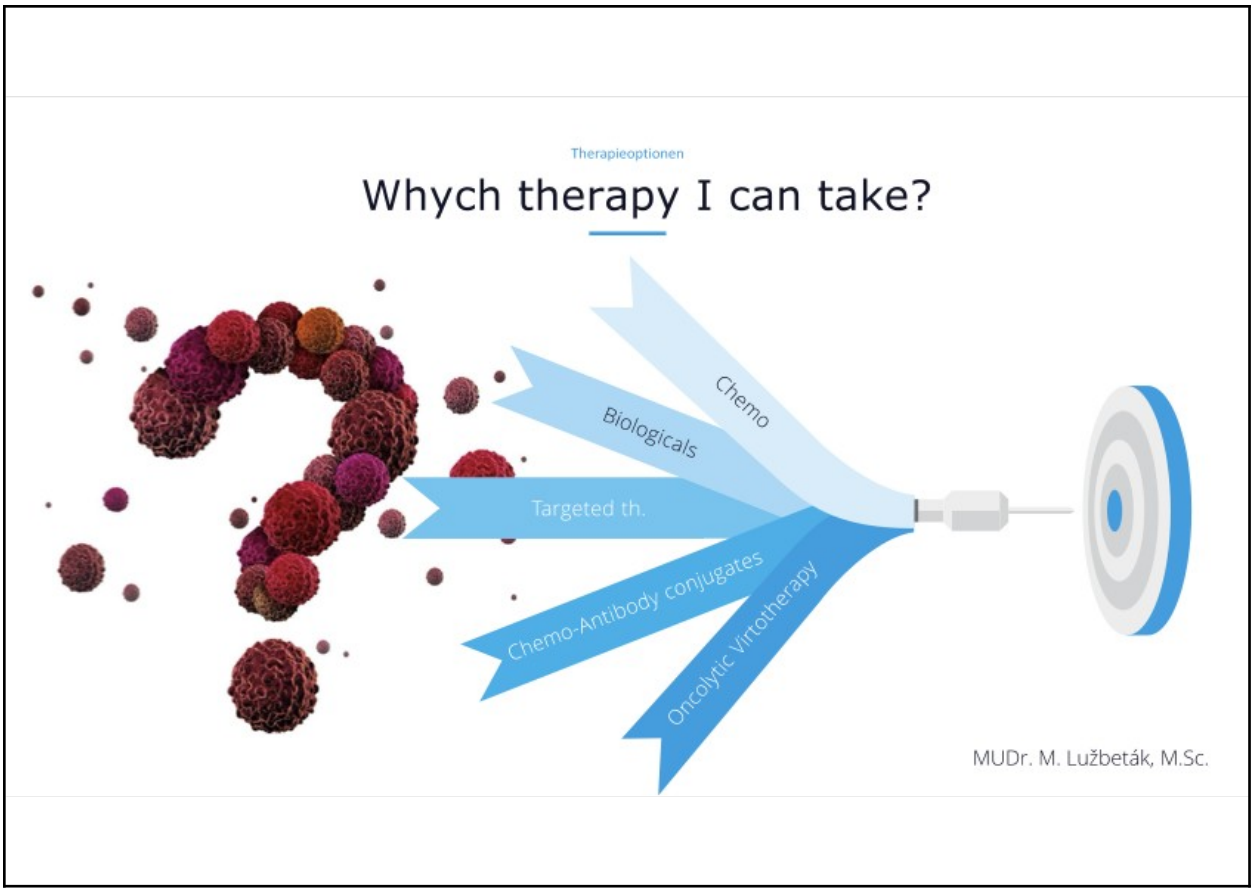

My question is always: What should I take? What should I give my patients? What therapy should they be given? We have so many options today. 20 years ago there was not that much. But today we have a lot of chemos, a lot of biologicals, targeted therapies. We have chemo antibody conjugates. We have oncolytic viruses. We have so many advanced therapies. For me as a physician, the biggest question is, “How can I choose what my patients should get?” This is what we've been talking about today. For example, at Memorial Sloan Kettering all the patients there with cancer get molecular diagnostics. This is a hospital we should look up to.

This is my philosophy: What is the need of my patients? If they come to me and they say, “I will be getting chemotherapy, and I want to know which natural substance or repurpose drug or other chemo I should take with it.” I say, “Good. This is our defined question. You get chemo with platinum, cisplatin or carboplatin, and you want to know if you should take curcumin or cannabidiol with it. Okay. We have to test it.”

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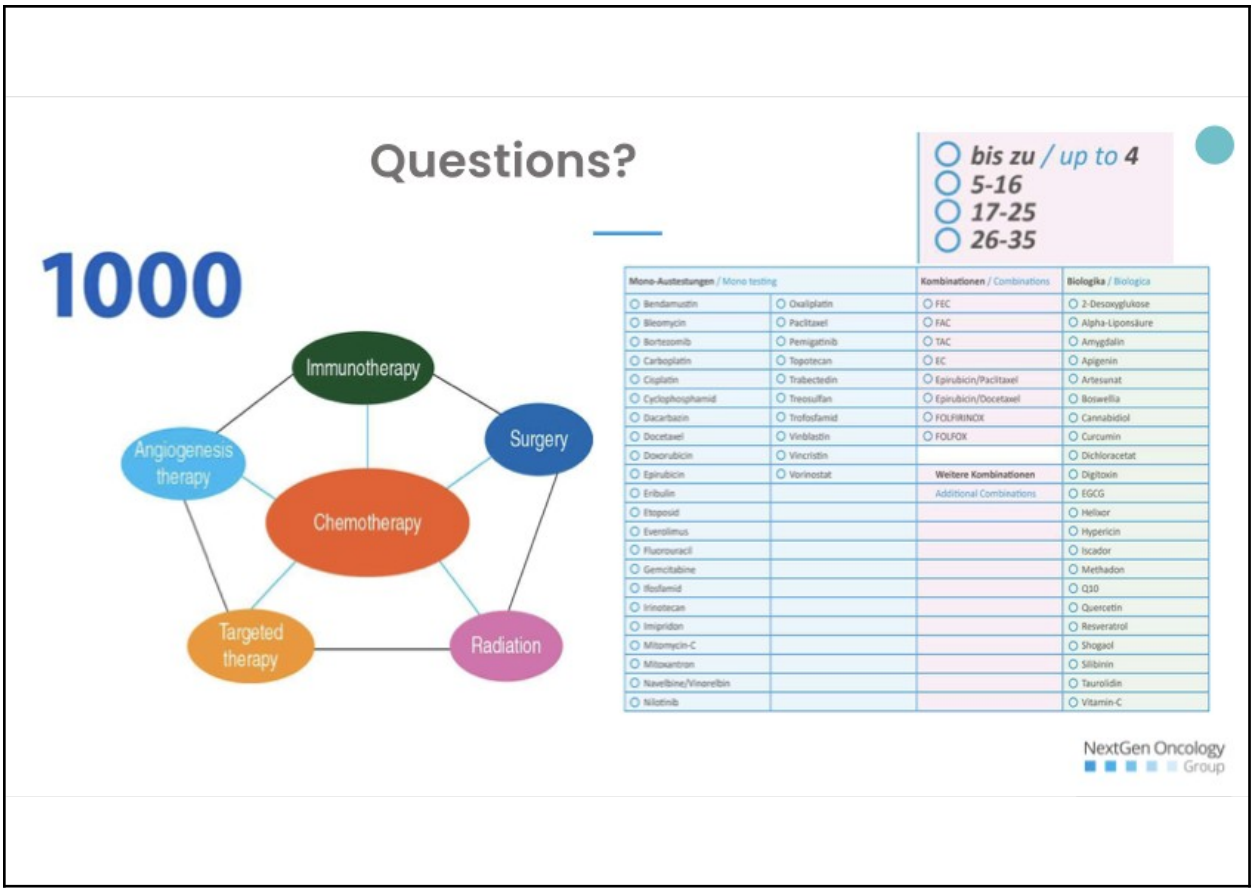

I have 20, 30, maybe 40 or 50 questions. This chemo with this natural substance. Do they work together or not? Then I can take blood, because I isolate circulating tumor cells, and try to find out if the chemo works. If the patient comes, and he says, “Okay. My disease is very advanced, and I just frankly don't know what I should do.” I said, “Yeah. I don't know either. So we have to find out.” Then we go for a tissue-based diagnostic, because I can ask the tissue maybe 1000 questions. If I do RNA or DNA diagnostics, I can go for whole transcriptome, look at the whole mRNA. I can look at the whole exome. I can look for the whole coding DNA. I can ask 20,000 questions, and then I distill 2000 questions that I take into account where I have an option.

Then we do the diagnostics in a broader way, so we don't just ask specific questions about this chemo with this natural substance, yes or no. We ask thousands of questions, and we try to find out: where are the sweet spots? Where are the spots that are the cancer’s weaknesses? If you know Sun Tzu, the great philosopher, he says, “Use your biggest weapon and attack on the weakest point of your opponent.” This is what we are doing. We are trying to find out the sweet spots.

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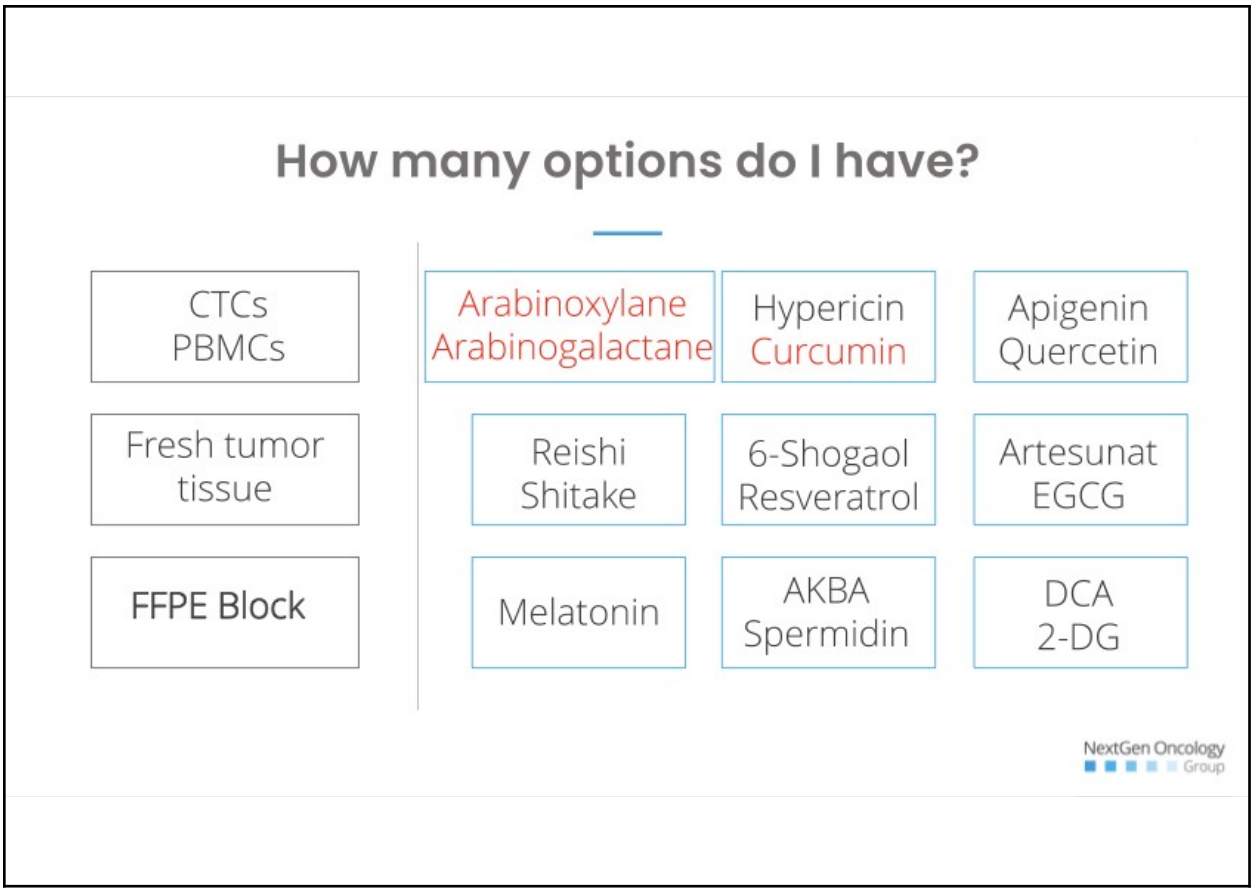

We are lucky. In Germany, we have so many options on natural substances you can give intravenously. We have curcumin, resveratrol, spermidine, boswellic acid, dichloroacetate, 2-DG, and deoxyglucose. So we have many, many options we can give our patients.

With this sheer amount of possibilities, there is a need for diagnostics because I don't know what my patients are going to need. I need to test it. So I try to base all my decisions on diagnostics. That's my quest for efficacy. If I have good diagnostics, I have good therapy, and I have good results. That's the medicine I'm living all day long, seven days a week.

That's hopefully my short introduction.

Brad Power 11:02
There's a question in the chat from Stratus: “Tell us your view about dendritic and NK cell therapy and pediatric cancer, and how we evaluate centers around the world that offer it, because the internet is full of ads and some legal, some scams.”

I would generalize this. I've heard before that in the domain of supplements, or you call them biologics and so on, complementary therapies, generally, often there's a lower standard of evidence. We have some evidence. It's “evidence-informed”, someone said, not “evidence-based”. We don't have phase 3 randomized clinical trials with the combinations of all these

things. So we have to trust someone, someone like yourself, who has some science behind it, who does everything based on testing.

The question generally is: How do you choose among the various people who are in your business of guiding people? What are the criteria you would recommend a patient or a caregiver would look at to select someone to give good advice in this area?

Martin Lužbeták 12:22
It's a great question, because I'm asking it myself all the time. My aim is to see the patients getting better. What should I do? And frankly, you have to try. You send patients to different centers like me and see the results, and if the results are not good, okay, you don't send anymore. After years, I try to understand my colleagues, their weaknesses and their strengths. If I know my cooperation partner, and I know he's exactly good at this, then I send the patients there, and I see the results. The patients come back and say, “Dr. Luja Bucha, thank you for sending me there. The physician is such a nice person, and his therapy works.”

I always need these two things. I love physicians that love their patients and try to be kind, and there are levels of kindness. Maybe you don't need a kind surgeon, but I think you do. Even surgeons should be kind to their patients, and afterwards, I do my diagnostics. I see what the patient needs, and I know where to send him. It's an absolutely huge network where I need to know everybody's weaknesses and strengths.

I'm not an expert in pediatric cancer, so I don't try to avoid these patients, but they just don't come to me. I'm not specialized in that. So this is my absolute weakness, and please don't send any pediatric patients to me. If they are maybe 14 or 15, or getting to be an adult, we can talk about it.

For a patient to find out which clinics are good is so tough. This is a very, very good question, because I think the patients have no chance to find out about all the clinics which on their own, the patients need their network. And this network of experience. Maybe you send some patients there from your group and find out.

I'm absolutely behind this idea that the patients should talk together. Also we talk among us physicians. We have to learn together. I love patients that are experts in their disease, because I consider cancer too complicated. If you want to go to every detail of every patient all the time, you need the patient who can understand their disease and colleagues that understand you. In this network we can find solutions, because the sheer complexity of this is amazing.

Brad Power 15:32
In our discussion with Mark Taylor, he described an approach that he used to gather information from patients that went to clinics. If you want to check out his website, patientledoncology.com, or look at the discussion that we had with him, he tried to directly address the problem, as Martin is describing it, which is, gather experiences from patients who go to clinics, and what are they given, and does it work well for them?

Stratus has a follow up question. He says: “Thank you for the answer, Martin. But for some of the therapies, costs are over 30 to 40,000 euros, and the cost becomes too expensive to do trial-and-error for Europeans. What has been your experience about adding cost as part of the decision process for patients looking to find these sorts of treatments?

Martin Lužbeták 16:27
I'm lucky that I've been more than 10 years at this, so I know most of the very, very good German clinics. I have gathered a lot of experience.

I always ask my patients, “What's your budget?” I know this is a question no physician likes to ask, because we don't sell anything. We are helping people, and it's embarrassing to talk about money in Europe. Maybe it's different in the States, but I always say this: “You have to pay for your therapy, so define your budget, and we need to find a solution.” That's also a part of my job, to work on repurposed drugs. We introduce agents that are low cost, bring efficacy, don't bring toxicity too much, and we can help all the patients. I understood this ten years ago.

We need to bring change to the system. The standard oncology system is based on very expensive medicines, and wants to go this way. If we want something else, we need to bring it on our own, and we need to bring it with high evidence, because nobody is going to accept it.

Brad Power 17:46
Allen Morris asked a question in the chat: “You noted that there are thousands of questions. These are very complex decisions that suggest that you must be using artificial intelligence. Do you, and if so, what AI?”

Martin Lužbeták 18:03
Sorry, I'm a physician. I have my technicians and IT guys. They could give you the answer about the AI. I'm not into this. If you have the question, write me an email. I can connect you with my guys. They can tell you. For me, I want to push the button and have the answer in AI. I absolutely know nothing. I trust my technicians.

Brian McCloskey 18:39
The Cancer Patient Lab was formed in part to dive into advanced diagnostics, because as patients, we're trying to redefine our cancer to identify targets of vulnerability, and the best way to do that is through advanced diagnostics. There's only so much tissue that patients have. There's only so much time that patients have.

If you look at the universe of advanced diagnostics, what are the ones that patients should be focusing on that correlate to the most effective treatments?

Martin Lužbeták 19:25
If you need a short time turnover, and you have defined questions, go for blood. If you have a lot of questions and a big problem, go for tissue. Always consider blood giving you less amount of

answers to your questions than tissue. From my perspective, what I've seen the last few years, every year, they are coming out with more and more blood-based diagnostics, but the information they can give you will always be less than the tissue.

Brian McCloskey 20:06
To be more specific: Should patients insist on getting whole genome sequencing? Should they be doing proteomics? Should they be doing spatial phenotyping? What are the diagnostics that are going to help them to discern what are the supplements that they should be doing? I think it's RGCC that has all the testing. It's very comprehensive. Patients don't have that time.

What sort of guidance can you give to patients as they look at all of these different diagnostic options? Where should they be focusing their time and energy?

Martin Lužbeták 20:51
Consider me as a one-to-one competitor with RGCC or some other providers. When you ask me, as a physician, I should turn off my lab half, and I can't. I'm just one person. If you go to a provider, and he works with a diagnostic tool, and he says, “This is what I've seen 100 times in a row bringing benefit to my patients.” Go for it, because he can apply the diagnostic tool, and he gets the results back, and he puts it in life, and it works in his patients. It's awesome.

In an ideal world, we would have complete diagnostics for every patient. That's not cost effective, but ideal worlds don't exist.

My recommendation to patients is: you have a budget, and you invest some of it into diagnostics, and a lot of it you spare for your therapy. This is where money comes in a crucial decision way. Don't use too much money on your diagnostics because you're going to need it for your treatment. If you ask me what I use from my lab, I use all the variety which I have, and I always try to find out for this patient in this situation what he really needs, what's going to make a difference now. If I have a very bad situation, and I need a really fast decision, I go for blood. I test chemo, or some agents on the blood. I introduce the agents, and when it works, okay. This is my lab.

This is how I came to Professor Boyer, my predecessor, because his diagnostics worked most of the times. The other labs didn't. Not every patient can try this. Trial-and-error. You can't try all the labs. A lot of times, patients come to me and have so many results from so many labs, and they are this way and that way, and nothing correlates. You can get crazy from diagnostics and media. It took me years and years to find out.

Sorry for not being too specific. I don't want to do this like advertisements for my lab.

Chad Magnussen 23:44
I used a lot of complementary therapies with chemotherapy. I used high dose vitamin C, some heat therapy, and fasting.
Just curious if those are some of the other things that you recommend and how you do them?

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You had mentioned omegas, and I'm just stumbling on some omega research and how they soften some of the cancer cells. I was wondering if you could expand on when you had mentioned omegas.

Martin Lužbeták 24:23
Omegas are just amazing, but are an intervention. So you need the dosage, you need the diagnostics, and you need to apply them. If you have a lot of inflammation in your tumor, you can lower the inflammation with omegas, and your immunotherapy is going to work better. So this is a good concept, scientifically sound, and so I take blood, I look at the ratio of omega-3 and omega-6 in the membrane of erythrocytes. If it's not good, I supplement one gram or two grams EPA DHA a day, maybe sometimes a little bit more, but I don't go very high on this supplementation.

Measure. Do. Measure. I always apply this in vitamin D, in selenium, in omega-3 acids.

I even measure the microbiome in my patients.

Chad Magnussen 25:33
I mentioned some other complementary therapies, like high dose vitamin C, heat therapy, and fasting. These were three I did.

Martin Lužbeták 25:42
Fasting is absolutely awesome, one day prior to chemo, on chemo day, and one day afterwards, if possible. These three days are crucial for your fasting. This is something maybe I learned from Walter Longo, maybe from other therapists, from the Meyer physicians here in Austria. But I absolutely go for it, if possible. Watch your body weight, but go for fasting. All my patients that tried chemo without fasting and then after tried fasting never want to eat during chemo again. Never. Not a single one of them.

If fasting is not working, most of the time, it's in the head. Fasting is stressful. So you need to be in the state of your mind that you would survive distress. If you put too much stress on your system, it's never going to work, because you overwhelm your regulation mechanisms.

Vitamin C, intravenously, I absolutely love that. It has not enough evidence to say it's cancer killing, but it has absolutely amazing evidence for reducing the side effects of chemo. It can have good effects on immunotherapy, because your immune cells need vitamin C.

I'm not using it as much as I've used to, but I use it a lot.

If you want to know if vitamin C is enhancing the effects of your chemo, I would try it in the lab first, and then I go for very, very high doses of vitamin C in my patients. The side effects are zero. I’ve never seen anything in thousands of infusions. The toxicity that it brings is very, very low, but the efficacy could be a problem.

Brad Power 28:09
How do you test vitamin C in the lab? Are you taking fresh tissue and then doing chemo sensitivity with the vitamin C?

Martin Lužbeták 28:16
That would be absolutely the optimal situation. But you need a surgeon, and you need transportation. You need to bring it live to my lab. So it's a big hassle. So the patients say, “You know what, I don't want to do this. I don't want to have another biopsy and so on.” So we go for blood. If we isolate circulating tumor cells, we apply it, and it works. You could have a good chance to have good results, and you would be disappointed how often it doesn't work at all. Maybe if you go for very high dosages and give it like three times a week, you can reduce a lot of the side effects of the chemo, and you don't mess up the good cytotoxic effects

Brad Power 29:12
Do you need intravenous, not oral, vitamin C to make it work?

Martin Lužbeták 29:16
I'm absolutely no fan of high dose vitamin C orally. I’ve never seen it work. I never tried it on a big amount of patients. If I have a common cold or influenza or I should get sick, and I have no other option, I take four grams of vitamin C, three times a day with my food. It helps, but it's a single man studying the common cold. That's not cancer, and that's why I only apply it intravenously.

Roger Royse 30:06
I'm looking at your website, and I notice you do CTC (circulating tumor cell) as well as cfDNA.

Are both necessary? Is one better than the other, or is one more accurate?

Are all CTC tests created equally?
Because there are a lot of different companies doing them, and having done them from a lot of different companies, I get wildly varying results.

Martin Lužbeták 30:38
Yes. Every lab has its different techniques. If you consider CTCs as a multitude of subpopulations in your body. They circulate into blood, into organs, into metastasis, in the tumor, and then go around. Every one of the subpopulations have a different inner life, and you now measure it at this point in time, once in the blood. It's a picture in that minute, that hour, and you try to then isolate it from the blood, and then count somehow. All these steps are different in other labs. If you measure it in different labs, you're going to always have different results. It's just because we humans have this technology of watching the CTCs. Always consider that you can't compare it. It's only the technique we apply on the blood.

That's why some labs take eight hours of blood from you and pick up the CTCs eight hours long. This is not applicable for the huge public because they want to take eight hours. The CTCs recirculate from the reservoir, from bone marrow or from the liver into the blood and go up and down. The CTCs are living cells. You want to find in blood where there are not way too many, and you try to fish them out and count somehow. This process is very complicated. This is how we humans try to measure living things. It's a complicated thing. There are many books on it, and many techniques. I try to measure CTCs and tumor markers. If they go up and if they go down together, I hope I measure something which is reliable for my patients. There are a lot of studies on CTCs. The consensus is they are prognostically valid. If they go up, the prognosis won't be good. If they go down or stay on the same level, the prognosis can be good.

This is what I would use CTCs for. We take them out of the blood and test everything you want on them. Sometimes the substances work. Sometimes not. I cannot test all the substances of the world.

Brad Power 33:39
A question from the chat is from Alexander Lavov: What is the approximate cost of your most comprehensive tissue-based test and your blood-based test? Maybe give a sense of your prices.

Martin Lužbeták 33:57
cfDNA is way too expensive from my perspective. I would measure it only in patients with known metastasis, with known druggable mutations, lung cancer, maybe breast cancer, where you really have a good chance that you find your mutations. You don't want to spend 2000 euros on something that brings absolutely nothing to you. This is going to happen most of the time when you measure in other cancers, like in sarcoma or melanoma. You're going to find nothing in a small panel, in a huge panel, which brings a lot of costs, like from tissue, you can do whole exome. It's like 6000 or 7000 euros, so it's super expensive. You can’t do it all the time. If you want to follow the evolution of your tumor, you would have to.

The biggest panel we can do on tissue would be like 15,000 euros with transcriptomic, exome, multinoma, and so on, on blood. We don't go too high. If you go to the biggest panel for CTCs and the sensitivity, you will be two and a half thousand euros. I try to keep the prices very low. I can give these diagnostics to most of the patients that would need it. Hopefully I help a lot of patients this way.

Brad Power 35:47
Robb Owen will be interested in the list of treatments that you had on your third slide.

Martin Lužbeták 36:14
This is just a very small slide. These are not the only options. We have many more. This is a reduction for my slide, because nobody could see all of them. It would be too busy.

Brad Power 36:27

Robb Owen had a similar slide for himself and his own treatment that had a list of possible treatments like this. In the other dimension he had the methods of action, and then how these different things are affecting different methods of action. He's an engineer, and so he reverse engineered his treatments.

One of the key supplements that he's very keen on, because he recommended it for me, was zinc. Zinc isn't on your list, but I just wanted to use that as a setup.

Robb Owen 37:08
I was a stage IV head and neck cancer patient last October. I modified my diet to just eating purely superfoods. I added a zinc supplement, which arrested the tumor growth on my stage IV cancer. I went for 10 months without it growing. They took me off of it for a week. It grew 20% or more, and then I went back on it, and it arrested the growth. I was taking vitamins, oral vitamin C daily, B12 and a multivitamin. I started my standard of care November 28 with radiation, cisplatin, and a steroid combination. After two weeks, my tumor resolved. I ended my treatment after three weeks, instead of going a full seven weeks. Based on that information, I never had any ill effects from the treatment. I never vomited. I actually looked about 10 years younger during my treatment. I incorporated extra hydration, stuck with a very limited super food diet, some moderate physical activity, dopamine release through getting outdoors. The foods that I was eating were helped with dopamine release. I also took coprasine, which is a receptor 2 antagonist, which plays a big role.

Based on all this information, I built a matrix and reverse engineered how and why it all worked so well. I had a P53 gene mutation. I isolated or focused on that, and working backwards, I've come to the determination that the zinc deficiency is what drove that mutation in the DNA strand. I had a high stress event during a long duration of stress, about a year before I was diagnosed, which I've worked back and actually been able to figure out that that associated with a couple other things were the catalysts that drove the mutation to metastasize into my neck.

The questions for you: how much work have you done on looking at zinc deficiencies? I believe the P53 gene is seen in more than 50% of cancers around the world. Roughly 15 to 20% of the population around the world are zinc deficient in their diet.

Also, on selenium deficiency: I noticed on the page that you do selenium. Selenium deficiencies, genistein deficiencies, with isoflavones, are directly related to an awful lot of issues, especially with the DNA nucleotide synthesis during cell replication. If the resources aren't there, the DNA gets mapped incorrectly, with the incorrect resources creating a faulty DNA.

Have you looked much into this? How much do you know about this? And what are your thoughts?

Martin Lužbeták 40:43
I try to measure zinc and selenium in all my patients. I rarely find a huge zinc deficiency.

Most of them are selenium deficient, because in Europe, you don't have so much selenium. From my perspective, it's easier to get enough zinc from what we eat than for selenium. I'm a huge fan of high dose selenium infusions in prevention of side effects of chemo and immunotherapies. So I really love them.

Frankly, I haven't given zinc for years to my patients at all.

Robb Owen 41:30
You should look into it, especially with the effect that it has on the P53 mutation. I don't know how often you see that with your patients.

Martin Lužbeták 41:39
It's the most found mutation in our patients. This is what I see a lot of times.

Robb Owen 41:47
From the research I've done, I believe there are human clinical trials going on currently with zinc supplementation in vivo. They've identified that zinc arrests squamous cell carcinoma tumor growth. I've based my work off that. I've written a peer review paper that we're getting ready to publish that identifies exactly how the P53 gene is missing a zinc ion. That's its mutation.

The selenium, I agree with wholeheartedly.

Brad Power 42:35
A chat from Ellen Miller: “I recently heard that high dose vitamins could be counter-effective when pancreatic cancer is being treated with chemo.”

Do you agree that supplements aren't always an answer?

How can a patient find out what's the best route for their particular disease?

Martin Lužbeták 42:52
Yes: I never give something out of blue unless I think it's going to help. I always measure something. To just put so many vitamins and so many supplements on it that you think there is no way it can't work. It won’t work.

The amount of the interventions you can give and make is limited because your system cannot cope with hundreds of things. If I have a deficiency, I go with a supplement. If I have a deficiency in a function of any immune cells, like NK cells, I go there with a supplement. If I miss some cells, I'm going to stimulate them.

The way I work is expensive and complicated. I need so much time for every patient to consider so many things. After years and years, I find out which works less and which works more. I still have a feeling that I'm just beginning. Every year I have thoughts that we know absolutely nothing about what we do, and we still need to work more and harder and find better ways.

That's super hard, because you're questioning all you do every day and trying to make it better, and that's the only way to fight cancer.

I learn from my patients. I learn from other therapists. I hate physicians or therapists who do just one sort of treatment for every patient that comes in, because, for me, that's not an ethical way of doing things.

Every patient needs something slightly different, because his cancer type is different, his stage is different, his immune system is different, and so on. The more diagnostics we can do, it will make our work better. You need to do it for every supplement, for everything you do. You need to think, “Why am I doing this?”, for every supplement, every vitamin, every probiotic, for everything that's how I work.

Brad Power 45:24
Let me pick up a comment from Roger Royce. He said, when you're doing this, in a complementary sense, when you're maybe between treatments, but if you're getting chemotherapy. He said, “I was told by docs and by herbalists to avoid anything beyond a multivitamin when I was on chemo, because any antioxidants will fight the ROS aspects of the chemo.”

Martin Lužbeták 45:49
No, that's absolutely wrong. How can you say something is completely wrong? Because you say, “Don't take any antioxidants because you're running a risk of risking something.” It's based on what? If you absolutely don't understand chemo, you have to be afraid of everything, yes, but if you understand how chemo works and how chemo generates side effects, you can do what you really understand. If you understand the matter of chemo and the side effects, you can give it.

I'm not a huge fan of multivitamins either. It's like putting everything in huge amounts and just hope something works. I always do single things if possible.

Brad Power 46:46
There's a long message in the chat from HC about her cancer. It's a rare ovarian cancer. There's no protocol for it at the moment, and she's worried about the frequency of testing after chemo. She describes the treatment she got, and then she said, “I'm concerned about being screened after chemo and wanting to avoid recurrence.”

The question is the testing you would recommend around chemo to measure effectiveness.

Martin Lužbeták 47:24
Measure before and measure every three months. Measurement, treatment, measurement. You don't want to fly blind. You want to know where you're going. So try to find out tumor markers working with you. Test big panel, test CTCs (Circulating Tumor Cells), maybe cfDNA. Try to find out what works for you. Maybe in the beginning you have to test more. Afterwards, you test less,

but never fly blind. Every three months or so, I would test at least for the first two, three years, to get some sense of what's going on and go out of the risk area.

Brad Power 48:05
We will be having future sessions on what's called “MRD”, minimum residual disease. These are liquid biopsy or blood tests that monitor your disease progression after treatment. This is very much consistent with what you're saying.

Martin Lužbeták 48:19
Yes. This is my area.

Brad Power 48:23
Helen follows up with: Do you have oncologist colleagues in France who you would recommend who are using the metabolic approach?

Martin Lužbeták 48:33
Nothing comes to my mind. I know Germany and Austria, but not France. Sorry.

Chad Magnussen 48:52
I’m curious if you test for chemo resistance factors, such as MDR1 or MRP?

Is there anything you can do to help prolong the chemo?

Martin Lužbeták 49:10
Absolutely. I love those factors. It's not a simple question of how to tackle them. If you go and see how they work, and your possibilities, then you always want to do diagnostics. Get a lot of results, a lot of information, and you process it, and then again, and then again, and try to find out how to tackle the resistances. The last few years when I've seen how huge the resistances can get after a couple of rounds of chemo, I just said, “Okay. Maybe this is not the right way. Maybe we need to not focus on the strength of the cancer, but focus on its weaknesses, and attack there.” Maybe a combined tactic with down regulation of multi-drug resistance and some immunotherapy, or some other metabolic way around.

This comes to the next concept of combination. I always combine a lot of methods. It creates chaos. We have to do this because otherwise we have less efficacy.

Brad Power 50:33
Helen asked in the chat: “My doctor won't redo the CT scan before six months.”

How do you use scans in your practice? You've talked about liquid biopsy, you've talked about tissue sensitivity and so on.

Martin Lužbeták 50:57

As often I can make them: sometimes every month, sometimes every second month. I never fly blind. I never trust anything. I never use one single method. I go for CTCs. I go for tumor markers. I go for radiation. I always want to know what's going on, and if I have a slight feeling it's not going in my direction, I test. I go for an MRI. I go for a PET CT every month. It matters, because if I fly blind, and I fly to the wrong destination, I can't turn around. Time goes in just one direction. If we miss the opportunity, we can’t go back. This big fear of testing, and big fear of radiation and so on, I'm not in this club. I don't have fears. I just want to be as effective as I can and as I have to, because this is a hard road. This is not the easy road with cancer. To beat cancer is hard.

Brad Power 52:03
Thank you very much.

“Evaluating Complementary Therapies in Cancer Care” (Martin Lužbeták, MD, MS) [#108]

CHAT DISCUSSION

00:17:33 Stratis Telloglou: tell us your view about Dendritik and NK cell therapy in PDAC, and HOW we evaluate centers around the world that offer it, cause the internet is full of adds some legal some scams...
00:24:08 allen morris: Thousands of questions suggest that you must be using Artificial Intelligence. Do you? and if so what AI
00:26:24 allen morris: PDAC ? means pancreatic ductal adenocarcinoma?
00:27:41 Stratis Telloglou: thank you for the answer Martin but for some of the therapies costs are over 30-40K Euros and the sport becomes too expensive to do trial and error for Europeans
00:28:13 Stratis Telloglou: was noto pediatric but Pancreatic
00:29:43 Noel Resch: You mentioned you did some research on TP53. My husband has this mutation. Will this mutation ever be actionable? What are your thoughts?
00:33:19 allen morris: Information technology is not specifically Artificial Intelligence - no need to consult your IT people
00:35:31 Noel Resch: Great question, Brian!
00:36:06 allen morris: If he has 100 patients, he should publish. That is called a case series report. A group or series of case reports involving patients who were given similar treatment.
00:40:32 Ellen Miller: I recently heard that high-dose vitamins could be counter effective when pancreatic cancer is being treated with chemo. Do you agree that supplements aren’t always an answer? And how can a patient find out what’s the best route for their particular disease?
00:40:54 Alexander Lalov: What is the approximate cost of Dr. Lužbeták's most comprehensive:
- tissue based test;
- blood based test?
00:42:53 allen morris: I use Kirkland multivitamin which contains 11 mg of Zinc. Is that adequate? Or do you recommend a higher dose and if so, what dose?
00:43:37 hc: I have mesonephric-like adenocarcinoma MLA ovarian type. It is a very rare ovarian cancer, making up less than 1 % of OC cancers. There is no protocol for it at the moment so they use the one for high grade serious cancer. My question is on the frequency of testing after chemo. I had six sessions of carbo/taxol and Avastin. After chemo the Avastin is continued for a year. I had a CT just before my sixth chemo session. My oncologist says the next CT is in six months. I asked for it to be sooner, he says no. What do you say? I have bloodwork every three weeks, before Avastin infusion. (For background, In addition to my standard of care treatment at this hospital in France, I use CARE ONCOLOGY CLINIC in London and am using off label drugs with some supplements.) I’m concerned about being screened after chemo and wanting to avoid recurrence. Thank you.
00:50:21 hc: Also, do you have oncologist colleagues in France who use the metabolic approach? I know they are talking about it, they have an association and writing books about it, Dr Laurent Schwartz is ringing the bells on potential of methylene blue (MB) as a metabolic

therapy and complementary treatment, but I haven’t found a dr I can contact about metabolic treatment, which is why I use COC in London)
00:51:59 Roger Royse: Replying to "I recently heard tha..."

I was told by docs and by herbalists to avoid anything beyond a multi vitamin when I was on chemo because any anti oxidant will fight the ROS aspects of the chemo
00:53:03 allen morris: Squamous cell carcinomas of skin are famous for spontaneous regression. For example, the keratoacanthomatous variant, believe it or not, spontaneously involute with no treatment in the majority of cases.
00:54:29 Roger Royse: Replying to "I use Kirkland multi..."

does it also have copper?
00:57:58 allen morris: Replying to "I use Kirkland multi..."

Is this a question to me?
00:59:44 Roger Royse: Replying to "I use Kirkland multi..."

yes
01:00:04 hc: Replying to "I recently heard tha..."

Me too. My oncologist said the same.
01:00:20 Ellen Miller: Replying to "I recently heard tha…"
Me, too
01:00:22 David Plunkett: Translate ROS please?
01:00:41 Roger Royse: Replying to "Translate ROS please..."

reactive oxygen species
01:00:54 David Plunkett: Replying to "Translate ROS please..."

@Roger Royse Thanks.
01:01:40 Ellen Miller: Replying to "I recently heard tha…"
I heard just today that pancreatic cells in the lab “love” antioxidants; that they are protective to the cancer cells.
01:01:51 hc: My doctor won’t redo the CT before 6 months, this is my question
01:02:21 hc: Thank you
01:04:33 Noel Resch: Thanks for the info about zinc and TP53. My husband has this mutation. I will be looking into this!!!
01:04:58 Roger Royse: Reacted to "I heard just today t..." with 👍