



Dr. Ron Ehrlich: Hello, and welcome to Unstress. I'm Dr. Ron Ehrlich.

Today we're going to discuss cancer. If there's anybody out there who hasn't been affected by cancer, either yourself a close relative or friend, well, I think you must be quite unique. It's not just that we're getting older, which I'll give you is a factor, but it's affecting children too. The incidence is rising over the last few decades and it's not just that we've got improved diagnosis. The incidence of cancer has gone up somewhere between 25 and 30% allowing for the increase in age.

So what is cancer? How common is it? I discuss this today with my guest [Dr. Joachim Fluhrer](#) who has been an integrative medical practitioner with over 40 years of clinical experience and has a specialized interest in cancer, specifically monitoring the progress positive or otherwise after diagnosis and in particular after treatment. I hope you enjoy my conversation with [Dr. Joachim Fluhrer](#).

Welcome to the show Joachim.

Dr. Joachim Fluhrer: Thank you Ron. Thanks for having me.

Dr. Ron Ehrlich: Now Joachim, cancer is a pretty big topic I think that it would be unusual for any person listening to not either have had direct contact with it themselves or at least one degree of separation. Could we just go back to some basics. What is cancer? What's actually going on when someone has been diagnosed?

Dr. Joachim Fluhrer: We use the term genetically for diseases, which involve malignant growth and then that means there's some growth of cells. Could be organs, could be tissue, could be brain, which grow uncontrollably. And that causes usually tumors. In the blood it causes plenty of cells, which crowd out other cells, but uncontrollable growth of cells, which then interfere with the normal function of the body and in some cases can cause the person to die as a result of it.

Dr. Ron Ehrlich: So for example, within a liver there are cells that are specific to liver function but when a cancer comes in, it means they're taking what is normal functioning cells?

Dr. Joachim Fluhrer: Yes. Any cell in the body. Like we know, for example, the liver. You can cut out part of the liver and the liver replaces back to its normal size and normal function. The skin can do that too. That's normal, and that's built into every cell. If that process of damage if you like, is not normal, like we could damage our skin for example, by getting out in the sun and getting white skin and getting damage, then we expect that these cells repair back to normal, but sometimes the damage is that much that the repairing process doesn't go normally and we have then damaged cells, which survive. And if they grow uncontrollably, then we can call it malignancy, or cancer, or tumor.



Dr. Ron Ehrlich: And the difference between malignant and benign of course is, well?

Dr. Joachim Fluhrer: Each one can produce a tumor, which means a growth, but a malignant growth is something that has got particular features when you look at the cells themselves but they cannot go and grow outside the cells and grow into a distant organ or a distant tissue and cause another tumor. We call that metastasis and that's malignant.

Dr. Ron Ehrlich: When we hear about it and I heard this statistic where one in two men and one in three women contract cancer and all this. We often dismiss it as oh, we're just getting older, but it's not really the case. Is it? How common is this problem?

Dr. Joachim Fluhrer: Well, in Australia, and you can have a look at [the Australian Government Cancer Australia website, it's called canceraustralia.gov.au](http://canceraustralia.gov.au) where the numbers are. It says that in 2017, the expectation is that 134,000 people will be diagnosed with a new cancer.

Dr. Ron Ehrlich: In Australia?

Dr. Joachim Fluhrer: In Australia. 134,000 this year.

Dr. Ron Ehrlich: Wow.

Dr. Joachim Fluhrer: And the main thing and there's also another number, which is people living with cancer, which have been diagnosed in the five years and living with it are 410,000 people in Australia. So this is a very significant number.

Dr. Ron Ehrlich: [Well, somebody who has been, I can put my hand up to that,](#) but it's even, it's not just affecting older people. Is it? It's not just that we're getting older.

Dr. Joachim Fluhrer: No. It's not just, obviously, if we have an increasing population and increasing aging population then we have increased the number of cancers being diagnosed. However, we also get increasing number of younger people being diagnosed with cancer malignancies and that is not yet clear what that is all due to, but obviously, there are suggestions of what might have been.

Dr. Ron Ehrlich: But What do you think is going on? Why is this disease so ubiquitous?

Dr. Joachim Fluhrer: Well, I'll just refer to [another Australian website, the Cancer Council with that. It's cancercouncil.com.au](http://cancercouncil.com.au) and it says that one in three cancers are preventable. That means they have put the number as 37,000 of those 134,000 people are preventable. That means that we do contribute or not contribute to that number of people being diagnosed. So one third are... smoking is obviously something that everyone knows. Then the other one is drinking too much alcohol, being overweight, a lack of physical activity, eating too much red and processed meat, and not eating enough fruit and vegetables.

These are preventable. These are the ones which cause the preventable cancers. And I think our modern lifestyle is including all of that.

Weight is a big problem. Lack of physical activity is a big problem. Not eating enough fruit and vegetables is an ongoing problem, so these are preventable causes.

Dr. Ron Ehrlich: We also hear about autoimmune diseases and there's a genetic component to how these diseases manifest itself. I mean, if the cause is similar, it manifests itself in skin cancer, and lung cancer, and liver cancer, and then, is that the genetic component do you think, or are there actual triggers that predispose us to particular cancers?

Dr. Joachim Fluhrer: When we talk about genetics, we have to then distinguish between so-called inherited diseases, which are inherited from our parents or from our ancestry. These are the minority of cancers and diseases. The majority of the genetic changes are genetic changes, which have happened during our lifetime. So that means that certain things and we can talk about are those, can damage our genes and if that's not being repaired together with other factors, can cause the cancer. For example, we have through buried to environmental influences. We have DNA or genetic damages going on every day, all the time. That's normal.

And then we have processes built into our cells, which are designed to repair those damages or if those damages cannot be repaired, if it's too much, those cells should die. And this is a normal process. If that balance between DNA damage or genetic damage and they're called the mutations, if these mutations, these cells cannot be repaired or not be controlled, and the cells can't die, then those damaged cells with mutations can then live and survive and then grow, and sometimes uncontrollably.

We have the process going on every day, every minute of our day. There's damage to our genes, damage to our DNA, and repair of our DNA. And then the various trigger factors like the obesity, and the smoking and the eating of meat, and too much radiation or sun exposure. Not eating enough fruit and vegetables, all of those areas are involved firstly, in doing the genetic changes, but also on the positive side if you do it right, helping us to repair those genetic changes and don't get tumours.

Dr. Ron Ehrlich: Now, diagnostically, when we come to diagnose a cancer, what are we looking at? Is it blood test? Is it scans? How is cancer diagnosed?

Dr. Joachim Fluhrer: Traditionally, the ultimate diagnosis is when you have a piece of tissue under a microscope and the pathologist looks at them and he or she will say, "These are cancer cells." So the way to get there is usually that we have a lump. We can feel a lump, now, it's in the breast, or somewhere on the leg, or on the back, and then we have it diagnosed. This is one way of finding a cancer but saying not every lump is cancer. They need to go and take a piece of tissue and call the biopsy, and then we put it under the microscope and we can diagnose it.

The other way is by doing scanning. So these are the imaging, these are the X-rays or CT scans, or MRIs and we can then see cancers or tumors, which are maybe one, no, five to six

millimeters in size. That's what we can detect on those scans. If they're smaller than that we cannot see them. There is the newer identification of systems, which are more sensitive than that who detect tumors at an earlier stage and these are what's called liquid biopsies. So any growing tumor will shed information that's good DNA, or proteins, or whole cells into the bloodstream and we can identify those. So through a normal blood test, you can now find DNA particles, you can find tumor cells, you can find proteins, you can find ion A, these are all these omics; genomics, metabolomics, proteomics. These are messages to identify these particles or whole cells in the bloodstreams. And that will lead to an earlier diagnose and earlier detection.

Dr. Ron Ehrlich: Yes, because the scanning one, which is they do what they do PET scans where they inject radio-sensitive or isotopes of sugar because cancer cells love glucose. Isn't that one of the tests that are done?

Dr. Joachim Fluhrer: Yes, you can do X-ray kind of thing, which are CT scans. And then you have magnetic fields, they're called magnetic field testing MRIs, and then you have radioisotopes. You can label or raise particular molecules in this per what you said the PET scans the glucose molecule with the radioisotope and inject that in the body and you can then with a particular camera see where these molecules go. Now, we know that tumors have a higher glucose turn over and so they accumulate in those places where the tumors are, and you can diagnose it.

This testing is being used not as a screening test, but as a staging test when someone is being diagnosed to see if there are any other tumors around in the body.

Dr. Ron Ehrlich: This other test, this liquid biopsy test where we're taking blood tests and looking for markers, if we looked at then, well, if there is such a thing as a normal population. People will always have these can of things circulating around their body. Markers that there is some mutation going on. Are we in danger of overdiagnosing?

Dr. Joachim Fluhrer: Yeah. It is the important and interesting question and there's still a debate out if you go in the scientific world. Now, just as a background, we know that a tumor, malignant tumor, which is say one cubic millimeter in size so that's like a pinhead, has got one million cells in it. The numbers are quite huge and a tumor, which is one cubic centimeter in size, can shed, an active tumor can shed 100,000 cells into the bloodstream on any given day. So these are large numbers of cells but the majority of these cells, which go into the bloodstream, they don't survive that and then they'll die within a short period of time, maybe hours. Only those, which have got the capacity to survive these hours, we call them cancer stem cells, can survive.

The aim is now in this world of early detection and screening to identify cells or particles in the bloodstream coming from tumors. If you then take any of these liquid biopsies, when we talk about cells, they could circulating tumor cells, or circulating DNA, or proteins, or ion A. The question is, is that related to the tumor? And that comes back to your question. If we take, and that's done with that one technology the main track [CTC technology](#), which if you take healthy medical students and look at the number of cells they have in the bloodstream,



it's only 3% of them. 3% of those medical students have lower levels of these cells in the bloodstream.

Dr. Ron Ehrlich: So low levels of the Circulating Tumor Cells?

Dr. Joachim Fluhrer: Yes.

Dr. Ron Ehrlich: So 3% if there is such a thing as a healthy medical student, 3% of these healthy medical students have some Circulating Tumor ... [This is the CTC you mentioned that stand for Circulating Tumor Cells](#). Okay.

Dr. Joachim Fluhrer: If I take then another group, say 50 to 70 year old people who have a higher risk either through family history of cancers or still personal risk factors like smoking or obesity and so forth, the ones we talked about before, if you take them and that's about, then we have 65% of those people, that's a high number, have got Circulating Tumor Cells in their bloodstream.

What we then did is then looked at these people. If we take those which have high numbers of those cells in the bloodstream, and then deep scanning we found that about 60% again of those with high numbers, we then could find small cancers in the body and it could be surgically removed. So this is early detection. I must say to you this is a new technology, this is a new application of these Circulating Tumor Cells testing. These numbers are currently being reviewed for publication. So this is a new area.

The question is, should we use that as a screening? And this needs to be sorted out in the long term. That, what is really very useful is those people who have been diagnosed with a malignancy, who had successful treatment like removal of the lump, and surgery, and had treatments, and then look at this area of prevention of the cancers. Because Ron, as you know, the majority of people hardly ever dies from the primary cancer. People die from the recurrence of cancer. So what's so important is to prevent the recurrences of cancers. And that's where these biological markers, if these cells of proteins or the genetics of it can help us detecting if that person is at risk, or the treatments, the preventive treatments that we do, are they working, or not working. That's where we can make a big difference.

Dr. Ron Ehrlich: Because as you say, it's the metastasis or the spreading of the cancer that's the problem and the way the metastasis spread is via the bloodstream. So it would-

Dr. Joachim Fluhrer: Rather the lymphatic system and the bloodstream.

Dr. Ron Ehrlich: The lymphatic system and the bloodstream. So it would-

Dr. Joachim Fluhrer: Because they're connected also.

Dr. Ron Ehrlich: Wow. So this-

Dr. Joachim Fluhrer: So we can find them.

Dr. Ron Ehrlich: And have the studies been done with this Circulating Tumor Cell detections that lifestyle changes doesn't have to be a surgical intervention or something. It can be a lifestyle change, has a positive impact on these Circulating Tumor Cells? Has there been studies to show that these interventions then reduce without going into surgery, or chemo, or any of that other?

Dr. Joachim Fluhrer: Well, studies have not been done using Circulating Tumor Cell as a marker for that, but we know statistically on average that people who increase physical activity, have stopped smoking, reduced alcohol, increasing fruits and vegetables, all of those, which we also have in primary prevention will also be valuable and beneficial in secondary prevention. So prevention of metastasis.

Dr. Ron Ehrlich: The Tumor Cells cancers love or metabolize sugar at a higher rate that's why we use those markers in PET scans, but they also thrive in a more acidic environment too. Don't they?

Dr. Joachim Fluhrer: Yeah, they thrive in an environment, which is compromised if you like. So if it's too much sugar, if it's too many toxins, if it's deficient in things, if it's the acid-alkaline balance is not right, then the cells grow and they can be stimulated. We need to put some note on that a tumor, which has established itself, creates its own environment and it will not follow the tenant bodies and environment. So it's difficult with an existing tumor to look at lifestyle changes and then get rid of that tumor.

If we use the lifestyle choices as a prevention to acute recurrences, I think that's where the issue mainly is. But some people try to if they have been diagnosed with metastases for example, or with a large primary tumor, through lifestyle changes, to get rid of that existing tumor. And that's very difficult. In the ideal setting, one would, if there's a tumor, one would remove it and then do all these active things to prevent recurrences.

It becomes slightly more complicated Ron there because some cancers are fast growing ones and others are slow growing ones. We know that slow-growing cancer, and we talk about prostate cancers, we talk about breast cancers. Of what we know, they may not need any treatment or they may not need significant treatment. We strive to understand, which ones are fast growing and which ones are slow-growing tumors. The identification of genetics, and proteins, and all of those. What we can do for example, liquid biopsies can help us identifying slow growing or fast growing tumors.

Dr. Ron Ehrlich: Where we're headed is a personalized approach to health care really. Isn't it? It's one thing to say all these tumors are one thing, but how they react within an individual is the big challenge. So this personalized approach to medicine is where we're headed?

Dr. Joachim Fluhrer: Absolutely. I think that everyone in the scientific world, and in the medical world is very excited about this direction. From the statistical average approach to focused individual diagnostic and response to therapy approach called precision medicine or personalized medicine or individualized medicine. The classic clinical trials that we have

had, there are a harvest handful of measurements from thousands of people. Just a few measurements.

The precision medicine, the personalized medicine, requires a different way. So you get a lot of factors really. You get the genetic factors, the DNA, the mutations, the various pathways, the proteins, the environment, the acid-alkaline balances as you said, and the oxidation, and the oxidation that will all of that need to be analyzed in order to find the individual responses for that one person. That's obviously the desired end bit in this journey coming from a statistical average to a personalized approach.

Dr. Ron Ehrlich: You shared with me and I'll share this article with our listeners, but [you shared with me this great article in Nature magazine](#) and it highlighted how some very common medications drugs that are in fact, the ten biggest drugs that are sold globally, the number needed to treat is a really sobering statistic. Can you explain the minimum number needed to treat that measure?

Dr. Joachim Fluhrer: Yes. If I give you a medicine then I don't have a comparison. It either works for you or it doesn't, but I don't know if it worked due to the medicine or because of something else. So I need to get a number of people and give the medicines to them and then see their response. So this is the number to treat for one person to get the benefit. And that for these medicines that you just mentioned is between one and four, and one in 24. For example, there are medicines for heart and common medicines that we use and you can see that in the article it's mentioned. It's Nexium. We need to give it to 24 people for one person to really benefit.

The problem has been that we don't know which one of those 24 will get the benefit. So we have to give to 24 for one to benefit. And our challenge is to identify that one person who would benefit from it and then give it to them and not give it to the other 23.

Dr. Ron Ehrlich: And hence this importance of this personalized approach to medicine. Because it's a shotgun approach at the moment. Isn't it? Or actually a machine gun approach to just spraying bullets out there to everybody and hoping that we get it we get the results that we're done. Actually, it's quite sobering to see. [I have that article online. It's an interesting one.](#)

Dr. Joachim Fluhrer: It's work while waiting and I think it comes from our clinical trials study. So using a large number of people, measuring a few measurable outcomes and looking for the average response of all of those people. I locate a thousand people we give them a medication and I give a thousand people a placebo, or sugar pill, or something, and then compare their results. If the statistics tell me that the people who were given the medication had a benefit and this is a statistical number and we can argue about that but there's some discussion in these paper about that.

If the statistical benefit is there for these thousand who get the medication, then that drug may get approved to be used for people in that situation. But if we don't look at these thousand people then what we need to identify the people who really did get the benefit. And for this one medication, it's one in 24, and for other if it's one in 12, or the best may be one in four.

So this is our challenge. Everyone wants to do better on this and that's where everyone is excited about this precision medicine and personalized medicine.

Dr. Ron Ehrlich: Joachim, before we finish, the one thing I like to ask all my guests is, what do you think the biggest challenge is that people face on their health journey today? Not just in cancer, but in general as they're trying to be healthy and well. What do you think people's biggest challenge is?

Dr. Joachim Fluhrer: The biggest challenge is to be disciplined but not fundamentalistic about one's own health approach. We often go against the trend of what's out there and what's on offer and we have to be strong like it's now Christmas time and there's times of giving, and sometimes indications at that time, and I remember when I was younger we had one piece of chocolate maybe every two weeks that was a special treat. Now we have abundance of chocolates. It's not who is going to have just one small piece of chocolate every two weeks. So we eat. We eat differently.

That's one issue. It's about the eating and it's not just about chocolate. A little bit of chocolate can be beneficial for you as you know. There is, our environment has changed. [There are some statistics that we're adding 12,000 new chemicals into our environment.](#) Now, how do they affect us? But the big issue, which we all know about is obesity in our population and that is connected to a huge risk factors. Not just in cancer, but also in arthritis, and diabetes, and Alzheimer's disease. All these chronic diseases.

So it's eating, and it's exercises, and it's maintaining ... Maintaining weight is one of the biggest issues I think in that area. The other one is [the mind](#), which is important also. We get bombarded with thoughts and influences in our thoughts at all times and we need to be mindful of what we are allowing to get into our head and what's swirling around there.

Dr. Ron Ehrlich: Well, that's that's great. This conversation we've had has provided some thoughts and things to swirl around in our listeners' heads.

Dr. Joachim Fluhrer: Thank you

Dr. Ron Ehrlich: Thank you so much today for joining me, Joachim.

Dr. Joachim Fluhrer: Thank you Ron for having me. All the best.

Dr. Ron Ehrlich: So cancer are cells that have mutated and those cells would normally die. It's a process that goes on throughout our lives. But when things go out of balance, those cells don't die in fact, they proliferate. And they start to affect the function of a particular organ they're proliferating in. But more importantly, if these cells proliferate and then go on to spread throughout the body, that's a process called metastasis. Then as you all have noted, it's those metastasis that usually pose the greatest threats. Now, it's interesting that we're moving towards a more personalized approach to medicine.

The study I was referring to is in [Nature magazine in April 2015, and we'll have the links to that on our Web page.](#) What it does is it looks at the 10 most commonly prescribed drugs.

Medications. What are called the blockbusters. And why are they called blockbusters? Because they bring in more than one billion dollars a year in revenue for the drug company. That's what defines a blockbuster.

Now, this is an example of how medications are prescribed across the board to those with a diagnosis. But the more important question is, how many people need to take the drug before we actually see a benefit? So it's referred to as the number needed to treat; to obtain a health benefit. Putting that into perspective, well, let's look at Nexium. Nexium is a proton-pump inhibitor, which is taken for reflux or heartburn. Sure, it will affect the stomach acid, but the key question is, does it benefit a person's health? Well, it turns out that in Nexium's case, only one in 24 people actually see a health benefit.

Now, what about Statins? Yes, it definitely lowers cholesterol but does it benefit a person's health? In this case, turns out it's one in 20. [I think the article's really well worth reading.](#) So a more personalized approach to medicine, is medicines biggest challenge and people are definitely rising to that challenge. Now, I'll have links to Joachim's website regarding those [circulating tumor cell testing](#). I'm actually doing it myself and I'll have links to that. Now, also another thing that's always intrigued me is that we know cancerous cells love glucose. That's why they inject radioactive glucose when you've got cancer, and because they know that it takes ... cancer cells takes up glucose proliferating it. And then they look at the scan and see where the cancer is provided the cancer is big enough.

So if you've been diagnosed with cancer as I have, well, what do you do? You could completely outsource the problem and hope for the best, or you could take control and improve the environment in your body and that specifically means the sugar or rather how many carbs you're taking that quickly get broken down into glucose and that's a pretty big issue. Now, in past podcasts, [we've talked to integrative cardiologist Dr. Ross Walker](#) who identified that cardiovascular risks are greatly increased when insulin goes out of balance.

[We've also talked to Dr. Gary Fettke](#) who Identified that cancer cells thrive in a high insulin environment not surprisingly given those PET scan or those body scans. We know those cancer cells love radioactive glucose, so it's fairly safe to say they probably like glucose or carbs. It would seem like a good place to start; reducing your insulin levels.

Reducing also body acidity might be another thing to look at and that's why vegetables particularly those with lots of colors always come up time and time again in almost every health condition. Now, as much as I enjoy a drink, we need to remind ourselves that alcohol and this is all about body acidity, makes the body more acidic. That needs to be factored in as well because body acidity and high insulin levels, high carb intake, all go often hand in hand. Sorry, I didn't buy that resveratrol in red wine. It sounds good for all those people who love drinking red wine. I could be wrong, but I just can't believe. I'll give you one study that said we needed to drink about 2000 liters of wine or 100 liters of wine a day to get the resveratrol health benefits. And of course, then you've got the super supplement. But I don't want to go into that now.

I think the idea of picking up [Circulating Tumor Cells](#) is also very interesting. Stay tuned to my Facebook and blog post because I'm awaiting my own results so all keep you posted. [As](#)

[you may know, I was diagnosed with prostate cancer two years ago](#). It was the more virulent type but fortunately, it hadn't spread. I had surgery, and I'm going to be doing some programs on men's health in general and this issue in particular in the future. But I'm also going to check out my Circulating Tumor Cells and I'll let you know more about it. Anyway, there's a lot to think about there. Until next time, this is Dr. Ron Ehrlich. Be well.

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