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## **State-of-the-art Lung Cancer Treatments**

Renato Martins, M.D.,

Hosted by Andrew Schorr

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### **Introduction**

#### **Andrew Schorr:**

Hello and welcome once again to Patient Power. I'm Andrew Schorr. Thanks for listening to our program sponsored every two weeks by the Seattle Cancer Care Alliance.

As a cancer survivor, I keep my ear to the ground very carefully to hear is progress being made, and happily there is progress being made in many cancers. And one of the ones that has been most daunting for a long time has been lung cancer. Very serious prognosis, but there is progress being made, and there is state-of-the-art lung cancer treatment being done at the Seattle Cancer Care Alliance. So today we have time to visit with Dr. Renato Martins. Dr. Martins is a specialist in lung cancer. He's medical director for thoracic, head and neck medical oncology at the Seattle Cancer Care Alliance. He's also an associate professor of medicine at the University of Washington School of Medicine.

Dr. Martins, as I say, there is progress being made. How would you describe it now when it comes to lung cancer?

#### **Dr. Martins:**

First of all, thank you for having me. And there is no question that we've made quite a bit of progress in this area over the last five to ten years, much more progress than we had made in the previous perhaps 20 to 30 years.

### **Understanding the Biology of Lung Cancer**

#### **Andrew Schorr:**

Wow. And what is the nature of that progress? Are we diagnosing people earlier? Do we have a range of treatments that are coming together? Where is that progress coming from?

**Dr. Martins:**

I think that most of the progress comes through a better understanding of the biology of lung cancer as well as the recognition that there are special types of lung cancer that may be driven by a specific mechanism and that we can perhaps interfere with these mechanisms, leading to better outcome to our patients.

**Major Advances in Drug Therapy**

**Andrew Schorr:**

Okay. So normally when somebody gets diagnosed with cancer they wonder how large is the tumor, where is the tumor, is it in more than one place? But it sounds like you're talking about it differently.

**Dr. Martins:**

Well, so we have made progress in that direction as well. We have better radiologic methods today to estimate the amount of involvement that someone has from their lung cancer, from his or her lung cancer, and that allows us to deliver the therapy that someone needs. We certainly don't want to operate someone that has more advanced disease and consequently will not benefit from surgery, as an example.

**Andrew Schorr:**

So let's understand the treatment. So what comes together? I understand that there are advances in drug therapy, and we'll talk about that. I've talked with one of your colleagues, Dr. Patel, about advances in radiation and putting it where it needs to be, aimed at the cancer tissue but sparing healthy tissue, and I know there have been advances in doing surgery in a minimally invasive way so that people recover quicker. It sounds like it's trimodal, I guess, coming together.

**Dr. Martins:**

Yes. And obviously the way to cure lung cancer is to remove it surgically, remove every single involved cell, and that's a complete resection. So if we can define the patients that truly have localized disease then we can improve the outcome by operating only on those that really can or have the hope of benefiting from surgery. And yes, for a group of patients with lung cancer, this is not something that's for everybody, but for a group of patients with lung cancer it's now possible to operate through much smaller surgical ports and then obtain a complete surgical resection, do a good oncologic surgery without too much trauma to normal tissues, which potentially can lead to faster recovery.

**Andrew Schorr:**

So at the Seattle Cancer Care Alliance you have sort of a multidisciplinary approach, don't you, to see which tools are right for which patient?

**Dr. Martins:**

We actually have a multidisciplinary clinic, and the patient has the opportunity when it's obviously indicated to see in the same day surgery, medical oncology and radiation oncology.

**Are Clinical Trials Producing Effective Treatments?**

**Andrew Schorr:**

That sounds like a terrific resource. Now, you're also doing clinical trials. First of all, what's been coming out of clinical trials just lately in helping us with our understanding of effective treatments and understanding how Patient A may benefit from this regimen and Patient B may be different?

**Dr. Martins:**

There are patients that are very motivated to participate in clinical trials and others that really have no interest whatsoever because they are perhaps fearful of the consequences of receiving something that is not considered the standard of care. And both patients are obviously correct because they are respecting their own beliefs. Our goal here is to have the opportunity to participate in a clinical trial for every patient that has an indication for the treatment of the non-small cell lung cancer or lung cancer in general, actually. And we're very close to that goal. We have trials now that cover pretty much every indication of treatment that one can think of.

**Andrew Schorr:**

Are you now understanding, I understand there's new research related to certain genetic abnormalities that when you can identify those, even experimentally, that there may be treatments that are especially on target for those folks.

**Understanding Lung Cancer Through Genetic Abnormalities**

**Martins:**

Yes. This probably represents the biggest advance that we had over the last three to four years, and that's the recognition of a special group of patients with lung cancer, and in these patients the disease seems to be driven by a specific gene abnormality which does not pass from the parent to the patient. It's a genetic abnormality that develops on the tumor only, and that genetic abnormality can now be tested, and when we do find that it's present patients can and have a very high chance of benefiting from a treatment that actually may not include chemotherapy initially.

**Andrew Schorr:**

Now, this sort of personalized care, is this where we're headed?

**Dr. Martins:**

Oh, no question about it. We're just starting to tap on that, and we're going to understand this disease better and better over time. And these patients that I described before to you represent approximately 10 percent of all patients with lung cancer, and I suspect that in the not too distant future we're going to understand better the biology of another five percent and then another 10 percent, and we need to move in that direction.

**Andrew Schorr:**

Now, for a long time it was, I don't want to say stagnant, but it wasn't moving fast. How rapidly do you feel things are evolving in the last couple of years and about the pace for the future?

**Dr. Martins:**

Well, I can tell you that as a researcher in lung cancer it seem that is the biggest limitation now to test the exciting new options of treatment that we have is to have enough researchers and patients, and that's a huge change from even five years ago. There are so many new agents that need to be tested. And we're still in the phase where we're testing the agents in isolation. So I'll take the liberty of perhaps an analogy here that, it's not entirely transferable, but just to explain what I'm talking about. You know in 1986 you had AIDS, and you had one drug to take, and most patients were dead in six months. Now you have AIDS, and you take a cocktail of drugs, and patients may live a completely normal life for many, many, many years. They are cured? Well, we don't know. That's still debatable. Some patients, the virus has disappeared completely. But certainly their disease seems to be under control and they enjoy excellent quality of life. Hopefully we can slowly move into that direction, where we can control the disease perhaps with a combination of agents that can keep the disease in check for a very long period of time.

**Andrew Schorr:**

Well, that's certainly good news. One of the questions people ask you, somebody's diagnosed with lung cancer, the family is terrified, the patient is terrified, and so we have this sense of progress. So they say, Well, how am I going to do? What do we have to tell them now, both in terms of longevity and also quality of life?

**Dr. Martins:**

I guess what you're asking or the question would be how long an individual patient will live with lung cancer if they have advanced disease, and although I don't shy away from that answer I think that it needs to be interpreted with great caution because we are very good in predicting how a hundred patients are going to do on average but we actually do a poor job in predicting how one single individual is going to do. And I think it's very important to keep that in mind. I never tell

anybody, You will live X number of months. Never. I think that's a mistake. I can tell them that if we had a hundred patients like you on average that's how much the survival could be expected to be.

**Andrew Schorr:**

You're seeing though, are we though changing that? In other words, what you read in a textbook years ago of what the longevity of the average lung cancer patient would be, are we changing that?

**Dr. Martins:**

Well, I think it's less of a question of what the longevity in textbooks really is but what each specific subgroup of patients with lung cancer can expect. So let's go back to the example of the trial that we conducted here, among other institutions, and it's going to be soon published in the more prestigious journal in medical oncology that there is. That trial we treated patients with this pill based on this genetic abnormality, and the median time to progression, so the medium time until the disease progressed, was longer than normally the median survival of lung cancer would be in this situation.

**Maintaining a Good Quality of Life with Lung Cancer**

**Andrew Schorr:**

Wow. Now, what about quality of life? So somebody says, Well, you know, I want to fight my cancer but I also want to have quality time with family and friends. Where are we with being able to do that now?

**Dr. Martins:**

I think that lots of patients come to the Seattle Cancer Care Alliance with the idea they want to fight the cancer. They want to fight their lung cancer, and they want to live longer, and they're willing to sacrifice quality of life to achieve that goal. And that's a mistake. We're not in the business of sacrificing anyone's quality of life. Yes, when we do give chemotherapy, chemotherapy, conventional chemotherapy is not a very smart treatment. It has a number of side effects, and they may potentially influence someone's quality of life, but we certainly have much better drugs to control the side effects of chemotherapy. And if someone has symptoms of their lung cancer, more often than not after they start treatment they feel better instead of feeling worse because hopefully we can control the disease and put the disease in check, and consequently the symptoms would improve. That's the goal.

**Andrew Schorr:**

So help us understand some of the drugs that you're working now on or ones that are approved or coming rapidly. What are your tools that you have when it comes to drug therapy for treating different types of lung cancer?

**Dr. Martins:**

So although chemotherapy remains a very important part of what we do, I think that it's unlikely that we're going to have new conventional chemotherapy agents that we're going to be very excited about. I think that everything that is good from now on will come from what we choose to call target agents or agents that block specific pathways that are important in the cancer cell. And there are many pathways. There are many pathways that are abnormal in the cancer cells, and consequently there are many new agents targeting these pathways.

So in lung cancer specifically we now have blockers of the epidermal growth factor pathway that have shown to improve the outcome of patients with lung cancer on average and actually make them live longer by just taking a pill. And we have a drug that blocks the formation of new blood vessels, and when that drug is given together with chemotherapy as an initial treatment for patients with advanced disease it also leads to an improvement in outcome and in longer survival. So these are indications in the more advanced setting of the disease. But in oncology traditionally we start to test things in a more advanced setting and then we move into earlier and earlier stages of the disease. Hopefully these advances will translate into better treatment for patients with early stage disease as well, increasing their chance of cure.

**Andrew Schorr:**

Now, we mentioned earlier about radiation and surgery. How do you decide who gets what or even in what order?

**Dr. Martins:**

So traditionally, and I think that applies for this discussion specifically, if someone really has very early stage disease they are treated with surgery. So those are patients that have a very small tumor and nothing else. If their tumor is bigger or they have lymph glands that are involved by tumor inside of the lung, they still have surgery as the primary treatment, the most important part of their treatment, but we now have evidence that the addition of chemotherapy after surgery may actually decrease the chance of the disease coming back, very much like what we do in colorectal cancer or breast cancer.

If the patient has a disease that's advanced enough in the chest that a surgery is either not possible or unlikely to lead to cure but the disease has not spread to other areas of the body, then we treat them with a combination of chemo and

radiation therapy still with the goal of putting the disease under control perhaps for a very prolonged period of time. And finally if the disease is beyond the chest then the primary treatment is with chemotherapy.

### **Do Second Opinions Offer the Best Path to Success?**

#### **Andrew Schorr:**

Now, people are listening to this and they may be far away from Seattle where you're based. How can they get the benefit of the knowledge that you continue to amass among cancer and your interdisciplinary team if they're living at a distance, maybe elsewhere in Washington state or one of the other states around or further away? Is there collaboration, second opinions, or are some of your protocols, if you will, also done at a network of outlying medical centers?

#### **Dr. Martins:**

So we do a fair amount of second opinions, and our goal here is to provide to the patient the best chance for them to fight the disease. And if what works for them is to come here and hear what we have to say and what we do here but receive their care closer to home, we are more than willing to work with their local medical oncologist and with the patient to get the best possible outcome. Sometimes the patients use us as a continuous backup plan, meaning that they receive an initial treatment and then later on they need some change in course, then they come back in here and hear what we have to say again at that point, and we're certainly willing to do that as well.

For clinical trials we are working very hard to open our clinical trials through the network of affiliated institutions of Seattle Cancer Care Alliance. That has not been possible at least not as much as we would like. We do have trials that are open through the Puget Sound Oncology Group, PSOG, which includes lots of regional doctors, and they can then put patients on clinical trials through that mechanism.

#### **Andrew Schorr:**

Given what you know, having really devoted your life and your medical career to this, how hopeful are you? And given that hope that things are changing if it were someone in your family how important do you think it would be to maybe check in with sub specialists in lung cancer to see do either some of the trials or the newest changes relate to their situation?

**Dr. Martins:**

Well, I think that a second opinion is something that should be welcome by any physician. I think that if we have something that is really serious in our lives and that applies to our health or other things as well, we like to hear more than one opinion to make sure that we are going through the right path for success, and obviously there is nothing more important than our health. So I don't see what would be the problem in getting a second opinion.

**Andrew Schorr:**

Now, let's talk about timing then. So when somebody develops lung cancer, primary lung cancer, typically it's been developing over a long time but yet often when it's finally discovered it can be advanced. So how rapidly then, it sounds like treatment once it's discovered needs to begin pretty quickly, so if you're going to seek second opinions you get on it right away.

**Dr. Martins:**

Yeah. In our group, and that includes surgeons as well, it is very, very unlikely that we would not be able to see a patient within one to two weeks of having all the necessary information.

**Impact of Smoking on Lung Cancer Patients**

**Andrew Schorr:**

Well, that's good to know. One of the things that people wonder about is, I know most of the time, the vast majority of time smoking is a bad actor in all this and the patient was a smoker. Not always. Do we understand what has caused the lung cancer?

**Dr. Martins:**

Well, so for example these genetic alterations that we talked about earlier, it's much more common in nonsmokers, and it may be responsible for the explanation of that clinical scenario.

**Andrew Schorr:**

But in the vast majority of cases it was the smoking that set off these bad cells.

**Dr. Martins:**

Oh, yes. Approximately 90 percent of all cases of lung cancer have a smoking history attached to them.

**Andrew Schorr:**

Now, what about risk to other families' members? Do we see much of a connection with secondhand smoke?

**Dr. Martins:**

Yes, there is no question. I don't think that anyone would dispute nowadays that secondhand smoking does increase someone's risk of lung cancer. But just to give you an order of magnitude, if someone lives with a smoker they increase their chance of lung cancer by 1.2 times. So you multiply by 1.2, and that's your chance of getting lung cancer versus someone that's a nonsmoker and never lived with someone that smoked. On the other hand, if you're a former smoker, a significant former smoker, your chance of lung cancer is 20 times higher than someone that never smoked.

**Andrew Schorr:**

Okay. So don't start smoking, for sure. Certainly, quitting smoking is still advisable.

**Dr. Martins:**

Absolutely.

**Andrew Schorr:**

So then do your lungs, the health of your lungs, maybe they never get back to zero but can we feel better? I mean, we should stop smoking for many health reasons, not just cancer, but do our lungs ever get back to pretty good shape?

**Dr. Martins:**

Yes. The cardiac risk from smoking goes down almost immediately after stop smoking, so that is very well documented. For the lung cancer risk, that risk goes down over time, and by 15 years from having stopped smoking it's close to the value of a never smoker but not quite. It never is back to a nonsmoking type of status. It's close. You know, I say, wow, 15 years that's really a long time. Well, there needs to be a day one of the 15 years. You're never going to get to 15 years if you don't start one day.

**Andrew Schorr:**

Right. Well, it was 22 years ago my mother-in-law gave us a wedding present of stopping smoking, and so I'm glad she's done that. That was a gift for herself and for all of us.

Let me and you this though then. What about early detection? There have been things in the news about should there be spiral CT scans and things like that. What's the thinking about that, and how to identify it earlier where maybe it's more treatable?

**Dr. Martins:**

So last year, I think last year or maybe early this year, there was a publication at the *New England Journal of Medicine* on the use of spiral CTs as a method of

screening for lung cancer. This was not a randomized trial, they just screened everybody, and they got to an outcome that was really outstanding. In patients with early-stage disease, had a more than 90 percent chance of getting rid of their tumor and the disease not returning five years later, so that was quite impressive. With that said, this was not a randomized trial. We don't know if this was a very selective group of patients that were destined to do well, and that's where the controversy lies.

There is a trial going on in the country, and we don't have the results of that. I think that our opinion here is that in the absence of the results of the trial it is certainly reasonable to discuss with your doctor the pros and cons of screening for lung cancer.

**Andrew Schorr:**

Okay. So if somebody had been a smoker for a long time and as we said would be a high risk, then that would be a discussion between themselves and their doctor.

**Observing Early Warning Signs**

**Dr. Martins:**

Right. And that should be a discussion that they actually probably should initiate.

**Andrew Schorr:**

Okay. Okay. And then as far as the early signs of lung cancer, so if it shows up you want to get on it right away, and as you said if it's caught early, if it's just in one spot, maybe surgery can be even curative, what should be the signs that people should be vigilant about?

**Dr. Martins:**

That is always a tough question because one of the symptoms is cough. Well, winter is upon us and both me and you are probably going to have a little bit of a cough during their winter. That doesn't mean that everybody that has a cough needs to stop sleeping and worry about their lung cancer. However, if someone has a cough that doesn't go away, particularly if they start coughing up blood, they have unexplained weight loss, chest pains, increasing shortness of breath, those are all symptom that deserve medical care.

**Andrew Schorr:**

Okay. Well, that puts it in perspective. So Dr. Martins, just to sort of sum up then. So you've seen a lot of progress.

**Dr. Martins:**

And we're just getting started.

**Andrew Schorr:**

There you go. That's what I wanted to know. So I would urge people, I know for me as a leukemia survivor I'm very glad that I consulted with specialists who deal specifically with my cancer. That's what Dr. Martins and his team does at the Seattle Cancer Care Alliance. So from my point of view as a patient I would definitely urge people to do that.

So Dr. Martins I asked earlier, I just wanted to end this way. It sounds like you're a very hopeful guy when you think about the future of what has been a really difficult cancer for so many years.

**Dr. Martins:**

Yeah, I am very hopeful, and if I were not I would be doing something else.

**Andrew Schorr:**

Well, that sums it up. Dr. Renato Martins from the Seattle Cancer Care Alliance and the medical director for thoracic, head and neck medical oncology. Thanks for being with us on Patient Power.

**Dr. Martins:**

Thanks for having me.

**Andrew Schorr:**

Sir, you'll probably be interested to know our next broadcast is December 5th, and then we'll be discussing state-of-the-art treatments for childhood leukemia, and we'll have with us then Dr. Colleen Delaney.

Of course, replays and transcripts of our program tonight will be available both at [sccapatientpower.org](http://sccapatientpower.org) and also on my website, [patientpower.info](http://patientpower.info) later in the week. One other note from the Seattle Cancer Care Alliance. They are encouraging women to access the latest technologies in mammography, and there's a new Mammovan in the ongoing fight against breast cancer. The purpose of this local mammography van is to reverse the downward trend, unfortunately, of women who get annual breast examinations, since women in Washington State have higher breast cancer rates than most other parts of the country. So you can find out whether this Mammovan will be in your area and you can make an appointment, just call 206-288-7800, 206-288-7800, or visit this website, [www.sccamammography.org](http://www.sccamammography.org).

For Dr. Renato Martins and Andrew Schorr telling you, as I always do, knowledge can be the best medicine of all. Thanks for joining us on Patient Power. Have a great day and join us again for our next broadcast sponsored by the Seattle Cancer Care Alliance.

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