

Veterans and Lung Cancer: Why Screening and Biomarkers Matter Transcript

Dr. Martin Edelman (00:00):

In the appropriate population, uh, screening for lung cancer is an exceedingly effective approach, uh, and, you know, how do I put it, massively underutilized, uh, in the United States.

Stephanie Williams (VO) (00:13):

Living with lung cancer looks different for everyone, but no one should go through it without answers. This is Hope with Answers, where patients lead and experts help guide the way.

Michelle Alarid (00:24):

Hello, my name is Michelle Alarid, and I'm a metastatic lung cancer survivor. I'm also a National Guard veteran who served in Desert Storm. Because of early screening, my cancer was caught at stage 1A, and that's why I'm a big advocate of early screening and knowing your biomarker. Both saved my life, and that's why I'm still here today, over 10 years later. So today on Lung Cancer Foundation of America's Hope with Answers podcast, I'm joined by Dr. Martin Edelman. Thank you, Dr. Edelman, for being here today.

Dr. Martin Edelman (01:01):

Well -

Michelle Alarid (01:01):

Before we dive in, would you like to tell our listeners a little bit about yourself and the work that you do?

Dr. Martin Edelman (01:08):

So I am, uh, I have a number of different roles. I'm a, uh, thoracic medical oncologist, uh, and have been for now several decades, uh, clinical investigator. Uh, I'm at the Fox Chase Cancer Center where I am the, uh, chair of the Department of Hematology Oncology, also the chair of the Department of Medical Oncology for the Lewis Katz School of Medicine, uh, of Temple University. And I too am a veteran. I'm a retired Navy, uh, uh, Medical Corps captain.

Michelle Alarid (01:40):

Great. Well, you've devoted your career to advancing lung cancer care through both research and patient care. From your perspective, why should veterans be especially proactive about lung cancer screening?

Dr. Martin Edelman (01:56):

So the veteran population, um, definitely falls within, frequently falls within the group that should be screened. Uh, there's an above average, uh, level of tobacco, uh, use, um, and, uh, which was, you know, as I recall when I was at sea, you know, heavily subsidized, uh, so definitely, uh, more smoking, um, than the general population. Additionally, uh, for, in many of the, uh, ratings in the Navy and in the other services, there was asbestos exposure. So for example, in Navy, a boiler tech, uh, you know, I saw yesterday actually an, an Air Force veteran. He had worked on the brakes. He was a Vietnam era. Uh, for the planes, that certainly gives you asbestos exposure, uh, possibly some of the other exposures

depending upon the era, agent orange, et cetera, uh, that might increase the risk for lung cancer. And then in general, um, you know, it's, uh, an important part of health screening.

(02:57):

So if one is at risk, and right now, we define that as somebody over 50, uh, who had a significant smoking history, officially 20 pack years, so a pack a day for 20 years, but, you know, if it's 18 pack years, bad enough, so you should be screened. Um, and, uh, so this, you know, screening definitely, uh, saves lives and, uh, is up there with, uh, good healthcare.

Michelle Alarid (03:23):

I didn't know really about all the risk factors and through the, throughout my own journey. I have really come to know just, it was shocking to know how many different everyday toxins the soldiers that are exposed to in the military. Uh, with my own experience and how I got lung cancer back in 2015 when I first got my first diagnosis, the first thing that came to mind was the burning oil that I breathe in when I was out in the war. Um, it really wasn't until a little bit later that I knew more about burn pits and diesel exhaust and other a- airborne toxins that I was exposed to out there, but I really didn't have a lot of clue about the things that we were exposed to until much later.

Dr. Martin Edelman (04:13):

Yeah, there's a lot that we don't know. And I think, you know, while tobacco use is, you know, overwhelmingly the most common and, you know, cause of, uh, lung cancer, um, there's no question a lot of pa - uh, patients that I see, you know, somewhere 10, you know, the statistics in, you know, the United States would be about 10% or so of patients, uh, were never smokers or I would say hard, some hardly ever smokers, very distant smokers. In other words, they quit, you know, decades earlier. Uh, we don't understand all the causes of lung cancer. In Asia, actually, uh, you know, a third of women with lung cancer in China were never smokers, uh, and there were, uh, thoughts about cooking oils and other, uh, potential, uh, exposures in the lung cancer in the never smokers is a somewhat biologically different disease. Um, so still learning a lot about it.

(05:09):

Uh, there are now some efforts, even though our screening is right now based on the U.S. Preventive Services Task Force and other advisory groups restricted to smokers for screening, there are programs underway to look at these other high-risk communities, particularly, uh, uh, Asians with, or those with family histories of lung cancer and, uh, whether they should be screened and the numbers look like they, they also benefit, uh, to a degree similar to that of the smoking population.

Michelle Alarid (05:40):

Many veterans may think that they feel fine, um, and don't need to be screened. Why do you think lung cancer screening is so important?

Dr. Martin Edelman (05:51):

Well, there's a little question. It saves lives. I mean, that's sort of the bottom line, you know, I always say we've done the studies. Um, whenever I speak to a patient about their diagnosis, their treatment, I always say it's like there are things that I know and things that I think about that, that are probable, and

then there's kind of, you know, my gut feeling. And, you know, this is one of those, I know it. How do you know something? Well, we, uh, did the, uh, the big randomized trial, uh, the, uh, um, uh, National Lung Screening Trial, NLST. I was on the, uh, endpoint verification committee for that because the endpoint was death due to lung cancer. That was the primary endpoint. We actually showed, uh, in that study, not only was there a decrease of death due to lung cancer, there was a decrease in overall mortality, which was even better because then there was no subjectivity whatsoever.

(06:44):

And so, you know, that was over 50,000 randomized individuals. There's a recently published retrospective study from the VA using VA database that shows an even more dramatic, uh, degree of benefit than was seen in, uh, the, uh, the NLST. Not completely surprising because there are many issues always with a, a, you know, looking at databases as opposed to a randomized study. But the degree of benefit is actually quite striking. Um, it is, if you... A, a, a common term that we use in, in the, you know, for screening is the number needed to screen to save a life. So if you look at mammography, and nobody anywhere debates the use of mammography, give or take, it's about one in, you know, 500 screen to save one life. For lung cancer, it's actually about 300 or so screened to save one life. So in the appropriate population, uh, screening for lung cancer is an exceedingly effective approach, uh, and I - you know, how would I put it, massively underutilized, uh, in the United States.

Michelle Alarid (07:57):

Yeah, I, I think, um, there's so many out there that you don't really get any symptoms or even, even if you were aware of what the symptoms are of lung cancer, you don't really get them until it's almost too late. In my own journey, it was kinda interesting. I, I... The only thing that I had that really would've been a clue at the time was just slight shortness of breath while I was working out, and that was just a couple days. But I got this pain in my lower back, which had nothing to do with my lung cancer from what I was told later on. But that pain got me to the ER, and if it wasn't for that, it wouldn't have been discovered, um, and it was caught very early, but that pain is what actually saved my life. It wasn't the shortness of breath.

Dr. Martin Edelman (08:49):

So -

Michelle Alarid (08:49):

Yeah,

Dr. Martin Edelman (08:49):

You sort of were, uh, you were kind of an incidental screening.

Michelle Alarid (08:53):

Yeah.

Dr. Martin Edelman (08:53):

<laugh> Yeah,

Michelle Alarid (08:53):

Very much so.

Dr. Martin Edelman (08:54):

Uh, the accidental, you know, and, and we see that, you know? I mean, patients, you know, get, get a scan for reasons that are remote from that, and they say, "Well, the back was fine, but oh, by the way." <laugh> Um, and, uh, you know, that certainly can happen. Um, many people, I mean, ideally, you're asymptomatic, uh, and we find it, and that's great. Um, and symptoms of presentation can be rather variable. They can be everything from, uh, a pneumonia that doesn't go away. I mean, it's a common teaching in, uh, you know, when you're in general internal medicine, you know, if you have a pneumonia, you gotta follow the x-ray till it clears, uh, because if it doesn't, particularly in a high risk population, uh, you gotta wonder and, and do further evaluation. Uh, people can show up with symptoms of metastatic disease at presentation.

(09:49):

Um, somebody I know is a physician and his, he was a never, never smoker, you know, and, uh, his presentation was that he had a seizure in the middle of clinic, um, and that was because disease, particularly in the never smokers, tends to spread very early on to the brain. And, uh, he does well with modern treatment many years later, but, um, you know, things like that, uh, there's, there's many, many different ways that lung and, and other cancers can present.

Michelle Alarid (10:22):

Mm-hmm. Yeah, so true. How much of a difference can it make when lung cancer is found before symptoms ever appear?

Dr. Martin Edelman (10:30):

At any stage of the game, it's always better not to have symptoms. You know, even for a patient with advanced disease, if you have advanced disease and you come through the door and you're walking and talking and you, uh, haven't lost weight, that patient is going to have an outcome that's much better than the person who's sicker. Uh, you know, no question, you know, always better to be without symptoms. Uh, and in particular, for the lower stages, when the lung cancer is still confined to a lobe of the lung and to sort of do the quick, uh, tutorial on lung cancer staging, you know, I always say the staging system is complicated and getting more so every day, but you can kind of think of it, there's, there's four stages, each of which has at least, uh, two or three, uh, or more sub-stages. And of those, but you really can group it.

(11:26):

There's localized disease, localized to, uh, uh, lobe on one side of the, uh, uh, chest, uh, without any spread of disease beyond the localized lymph nodes. Call that localized, those patients can be, uh, cured with, uh, surgery, frequently requires other treatments as well. Um, uh, there's locally advanced, which most frequently is that, uh, the disease has spread to lymph nodes in the middle of the chest, can also be a large tumor that's, uh, uh, involving a major structure, uh, or disease that has spread beyond the chest. And that, that's, you know, v- very, very simplistic, but one way to think about it. So the lower down you

are in the numbers, the better off your outcome will be. Um, and not just because, you know, one gets surgery or a localized therapy, but, you know, if, you know, we know lung cancer can disseminate very early on, but our treatments and our potential to cure, you know, is always better the sooner we get at something.

(12:28):

And even in, like I said, even in advanced disease where now for the first time, cure has become possible, um, sooner is always better than later.

Michelle Alarid (12:37):

Yeah, definitely. That, that is the key. Um, let's talk about lung cancer screening. My experience with low-dose CT scan, it's quick, it's painless, it's non-invasive. It's probably the easiest test I've ever taken. What do you want veterans to know about the lung cancer screening process?

Dr. Martin Edelman (13:01):

Well, like you said, it's easy, it's simple, and it's, you know, important to get it done. Uh, what we know is that, uh, you know, getting the scans, you know, particularly when one is asymptomatic in the appropriate group, uh, clearly saves lives. We don't quite know how frequently when the study was first done, there was one scan, you know, what's called an, uh, prevalence scan. They had the initial scan, and then there were two annual scans afterwards. Uh, we don't know after that, should they be repeated annually, every other year, every five years? You know, I think that's an area in evolution. Um, so, but, you know, I, I, I would also say that the low-dose CT scan is also a teachable moment. I don't think that, you know, the physician at the VA or anywhere else, getting the scan should never lead one to say, "Oh, my scan is negative.

(13:59):

I can keep smoking." That's not a good idea, um, you know, for the people. Again, because right now, in the US, the only group that's recommended for this are people that were, you know, former or active smokers. Um, so we prefer former smokers, uh, and one should stop smoking. Um, but also, part of this is there are many other things that, uh, the group that's at risk for lung cancer, uh, can have that as problematic, things like heart disease, you know, other lung disease. So getting good medical management and control of those other areas is also important. So, you know, having cholesterol controlled, high blood pressure, all of... And, and getting out there and exercising. So all of those things are important and should be part of, you know, the overall screening effort. It shouldn't just be confined to lung cancer.

Michelle Alarid (14:50):

Yeah. It should be part of, um, your annual tests -

Dr. Martin Edelman (14:54):

Uh-huh.

Michelle Alarid (14:55):

As far as I'm concerned with all the toxins that we are exposed to in general. So maybe someday that'll be part of, uh, the regular screening that you go through every year. Um, let's see. Some may wonder about the cost of lung cancer screening, but it's covered by the VA and by most major insurance plans. How can veterans find out if they qualify?

Dr. Martin Edelman (15:22):

I think one thing is to make sure to ask the physician about lung cancer screening. I mean, we do, you know, colon cancer screening is covered, you know, mammography is covered, lung cancer screening, you know, should be covered.

Michelle Alarid (15:36):

Mm-hmm. Well, a recent VA study found that there's a three-year lung cancer survival within the VA has more than doubled.

Dr. Martin Edelman (15:47):

Lung cancer treatment today is dramatically better than what it was 20 years ago. Um, first off, lung cancer is not one disease, it's many diseases. You know, when I started out, you were either small cell lung cancer or non-small cell. Then we made this big difference whether a non-small cell or squamous or not squamous. And now there's, you know, about a dozen different molecular varieties, multiple different immunologic varieties, and, you know, the numbers keep growing. And with those, it's not just important that we know the biology, we have things we can do about it. So the advent of, you know, more effective, uh, drugs, uh, better supportive care, all of those together, you know, immunotherapy has just changed the world for, you know, the typical smoking-related lung cancer. You know, for the first time, I mean, I'm seeing patients who are, you know, years out from the end of their treatment, so much so that, uh, my, my physician assistant has a separate clinic for patients that are more than two years from when we completed their two years of treatment for advanced disease.

(16:53):

We have people who are five and six years or more out. And, you know, I gotta tell them at my last... When I visit, when I'm turning them over to her, I say, "Don't take it the wrong way, but I hope never to see you again." <laugh> And, uh, you know, and then we have the targeted therapies for those with specific molecular abnormalities, and, and, you know, much of this also builds on the drugs that we had before, the cytotoxic chemotherapy agents that tend to get a bad rep, but actually are increasingly better tolerated as we've learned how to optimize the doses and supportive care is better. Um, really, management at every stage of, of lung cancer is, is far better than what it was, and so this in turn has translated into survivals that, you know, the likes of which we truly never saw before.

Michelle Alarid (17:40):

Yeah, it's definitely giving a lot more hope, that's for sure.

Dr. Martin Edelman (17:42):

Mm-hmm.

Michelle Alarid (17:43):

And that's what we need as lung cancer patients. Well, explain how knowing your biomarker can... Biomarker status can influence treatment decisions.

Dr. Martin Edelman (17:55):

So as I t - uh, tell people, we, we can't treat lung cancer today without nobody... Let's put it this way, nobody should treat lung cancer today without having a, you know, uh, knowledge of the appropriate biomarkers. So this is gonna vary depending on the type of lung cancer. So small cell lung cancer right now, which is about 10, maybe 15, 10% or so, there is, a- as of now, no biomarker. In the, uh, non-small cell, uh, for all patients, we need to know about their immunologic status, which is using something called PD-L1 or programmed death ligand-1. Uh, the higher you are, the better it is. Basically, uh, in simple terms, there's a, um, it's called the PD-1, PD-L1 axis, which is, when it's activated, is involved with allowing the cancer to evade the immune system. And so the immunotherapy drugs that we have, uh, most of them are the anti-PD-1 or PD-L1 drugs, and what they really do is allow the immune system to see the cancer and kill it.

(19:04):

Um, and how you select whether to use those drugs by themselves or in combination with chemotherapy, uh, or perhaps with the dual immunotherapy agents really revolves around the knowledge of the PD-L1 status. We typically talk about, you know, less than 1%, one to 49, and, uh, 50% or greater. The higher you are in the right population, the more likely you are to respond to immunotherapy. Um, then for the non-squamous population, um, the results of what's called next-generation sequencing and RNA analysis are really important because there are many now at least 11, 12 activating mutations, uh, as well as other things that deal with expression of various proteins for which we have highly specific drugs, um, which, you know, if you've, for example, in a never smoker, about half the patients who are never smokers and have, uh, lung cancer, about 50% will have a mutation, the epidermal growth factor receptor.

(20:13):

Um, if you know that, we have drugs that are 70, 80% patients will respond and sometimes live for many years on these drugs. Um, there's something called an ALK translocation. Uh, the latest generation of drugs there, there's a drug where the, uh, median time before somebody progressed, uh, now is in excess of seven years. So we're talking a disease when I was in training where there was a 90% one-year mortality. So things have definitely changed a lot, and you can't adequately treat people without knowing all that data. And those markers now, you know, should be obtained on both the biopsy, uh, as well as to look for circulating, uh, DNA, tumor DNA in the blood. And I think over the next several years, we will have more markers. Hopefully, they will have some things to better determine treatments in small cell lung cancer, and probably with circulating tumor DNA, better ways of following disease than just with, uh, uh, CT scans and other radiologic scans.

Michelle Alarid (21:22):

Mm-hmm. You know, I, I definitely agree. Biomarkers, I really, truly believe, personalize your therapy. It really made a difference with me -

Dr. Martin Edelman (21:34):

Uh-huh.

Michelle Alarid (21:35):

Uh, when it spread to my brain. It helped to know the exact mutation, like what you said, so they could put me on a targeted therapy drug. I've had minimal side effects, and for me, that's a big deal, because I, I lived a very active life. I was pretty young when I got it. I was 45. And I'm still living a good quality of life and enjoying myself. And it's thanks... I thank God that there was a drug that could help me, you know, back then. And so just throwing me on chemotherapy and hoping something would work and, and kill it, it's been allowing me to just live my life the best that I can, and I'm, I'm enjoying life.

Dr. Martin Edelman (22:18):

Yep. And that's been one of our great success stories that dates back to around, uh, 2000, uh, or so when the first, uh, generation of those drugs, which were, shall we say, significantly more toxic, and now generating, you know, new, new generations of drugs and approaches to deal with many people whose disease eventually becomes resistant. Um, so it's been a, that's been a very, uh, fascinating story that continues to evolve. Um...

Michelle Alarid (22:51):

Uh, definitely, because of all that, all those advances, it's creating more hope for all of us. Uh, doctor, as chair of LCFA's Scientific Advisory Board, you have a front row seat to some of the most promising lung cancer research underway. What developments are you most excited about, and why should veterans diagnosed today feel more hopeful than maybe five or 10 years ago?

Dr. Martin Edelman (23:20):

So I think there's, you know, an amazing amount of n- new agents and, you know, and that, that are being developed building on the basic science, the clinical observations that are made, um, by investigators in the US and elsewhere. Um, and this is, you know, we've already seen, like we discussed before, you know, the rather dramatic progress, but still a ways to go. Uh, I think, you know, a- approaches that hopefully will optimize the use of immunotherapy extended to the populations that are not benefiting. So interestingly, somebody like yourself with EGFR mutated disease generally does not benefit from immunotherapy, uh, because, uh, the biology of the tumor is different. It's not sort of a term that we use, immune desert. Uh, the, uh, inflammatory cells generally don't get to the tumor. So ways of activating that are important. I think very exciting have been the recent breakthroughs with, um, uh, treatment of, uh, patients whose disease, uh, is characterized by a mutant, uh, um, uh, oncogene called KRAS.

(24:36):

Uh, so it's got a lot of press recently because it's, uh, something that also, uh, is very important in pancreatic cancer. And the, uh, KRAS actually was discovered 40-plus years ago, uh, was felt not to be druggable, and some people got smart, figured out how to drug it. Now there's a num, you know, numerous agents that are out there, and I think that's gonna be the next wave of big drugs. Uh, when I was at our recent American Society of, uh, Clinical Oncology meeting, um, I, you know, I, I wandered into

one session, they were looking at combinations of immunotherapy with some of the newer KRAS drugs. I thought I was in the lymphoma section because response rates were 90%, uh, for some of these patients, and that's, like, unheard of. And, um, you know, and some of this is gonna be very durable. I think that, uh, you know, we are really at the cusp of even more progress.

(25:33):

Um, but, you know, it's like with everything, you know, you don't know the results till you do the studies. And, uh, all the work and, you know, you'll always see from some of my, you know, laboratory colleagues, "Oh, we did this at a mouse or something." Well, you know, people are a lot more complicated than mice, and, uh, you know, not everything will work when it hits the, the big time. So we have to do the studies and, um, you know, look at the results.

Michelle Alarid (26:00):

Back when I first got diagnosed, it, it... Boy, so much has happened within that time over 10 years. I never would've thought that I would've heard the words coming from a doctor saying that we might be able to treat this like a chronic disease, and I would've never thought that back in 2015. It really has given me a lot of hope. Back then, I, I wanted to be an outlier, and now that's... I, I'm even past that, and I'm meeting other outliers, and that's kind of the norm now, which is great to see that with other long-term survivors. I'm very happy to see that.

Dr. Martin Edelman (26:39):

Yeah, not, not yet the rule, um, in EGFR, but like I said, the ALK, uh, patients do remarkably well with the latest generation of drugs. I think EGFR, you know, again, like, the, the next generation of drugs is kinda already being developed, likely to be approved in the not terribly distant future. Um, things are being built upon that. So, you know, and it's, it's a process, uh, and I think, uh, um, how do I put it? There is no good lung cancer, but for the, you know, for the first time, I think for the majority of patients that we see, we have things that can offer, you know, not months of improvement, but in most cases now, many cases, years. And for some fractions, even with advanced disease, cure is not a ridiculous concept anymore.

Michelle Alarid (27:32):

Mm-hmm. Right. So for veterans who have recently been diagnosed and maybe feeling scared or overwhelmed, what are the most important questions they should be asking their doctor?

Dr. Martin Edelman (27:46):

Well, you know, uh, whenever I sit down with somebody the first time, I do their, my tutorial on lung cancer. I explain the different kinds of lung cancer, so they should know what type of lung cancer they have. They need to know the stage of lung cancer. As we talked about, you need to know the markers was, you know, make sure that, in fact, the sequencing of the tumor was done. It is actually quite shocking that it's not always done, um, you know, or not done completely. Uh, I need to know the PD-L1. If necessary, they may need another biopsy. Uh, you know, we, you know, biopsy quality varies, uh, rather enormously, even sometimes within institutions. Uh, so, you know, you need to make sure there's

enough information and, you know, hopefully you'll have enough time before one has to, you know, have a treatment intervention to make sure that you get that in hand.

(28:40):

And certainly, that's the case in advanced disease. Uh, even now in localized disease, there's, um, still, you know, some debate, but, uh, you know, for many of those patients, getting treated upfront with, um, uh, immunotherapy, chemotherapy, or targeted therapy, depending upon the nature of the disease, uh, can really alter, you know, progno - you know, make it simpler, alter prognosis, um, frequently result in shorter treatment courses. So, um, the more we know going into this, the better. Um, if somebody's not having symptoms that they have, you know, um, relatively, you know, they're, they're doing okay, uh, don't get rushed into doing things. I think you need to have a conversation, um, and, uh, you know, there are frequently a, a number of different options.

Michelle Alarid (29:37):

Mm-hmm. Oh, I agree. And I'd like to add too, which is something I would've never thought back in 2015, but also a second opinion, and that's something more that's promoted, which is great. It's not trying to discount your current oncologist, but just making sure that every box is checked for you. This is... It's a very important... Thing to do. Now, if

Dr. Martin Edelman (30:02):

Every

Michelle Alarid (30:03):

Veteran listening today remembers just one thing from this conversation, what would you want that message to be?

Dr. Martin Edelman (30:12):

So I think first, um, as I just said, we have options for treatment for this disease at every stage of every type, better than what it was, reasonably well tolerated. Um, and if that's the diagnosis, you know, it's seen and, you know, don't, don't run away. Um, and then for the population that, uh, is, you know, at high risk, you know, the people who were smokers, uh, you know, former active, former, and well, certainly if active quit today, uh, you know, nothing worse that you can do to yourself to, you know, it's like, because you're not only damaging your li - you're damaged, causing all sorts of problems, um, but, you know, screening is good and it saves lives.

Michelle Alarid (31:02):

I totally agree. Well, thank you, Dr. Edelman, for joining us today, giving all this wonderful information. And for all the viewers out there, if they wanna learn more about lung cancer, please visit lcfamerica.org. And thank you for watching.



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