



EGFR-Positive Lung Cancer: New Treatments, Real Answers, Real Hope

Lysa Buonanno (00:00):

So once you have a diagnosis, is that something then that I should worry about my family being tested for that also?

Intro Voiceover (00:07):

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.

Lysa Buonanno (00:19):

Hi, I'm Lisa Bonano and I'm a patient advocate and I am very happy to be here today with Dr. Berger.

Dr. Alice Berger (00:25):

Hi, I'm Alice Berger. I'm an associate professor at Fred Hutch Cancer Center in Seattle, Washington, where I run a lab-based program studying lung cancer.

Lysa Buonanno (00:35):

And today we're going to talk about a really important topic. We know there are a lot of biomarkers that drive lung cancers now, and EGFR is one of those. Can you tell me, is that something that we are born with? Is this something that I develop later in life? What is an EGFR mutation?

Dr. Alice Berger (00:57):

Sure. Thank you for asking that question. In almost all cases, it's a mutation that develops in your lung cells at some point during your life, so you're not born with it. In very, very rare cases, people can be born with a variant in EGFR that would predispose them to lung cancer, but almost all the lung cancer cases out there with EGFR are these kinds that are acquired.

Lysa Buonanno (01:23):

So once you have a diagnosis, is that something then that I should worry about my family being tested for that also?

Dr. Alice Berger (01:31):

So again, it would be really rare. However, it doesn't hurt to ask your doctor if they've ruled out a hereditary cause for your lung cancer. This is something that they can glean through testing, but not in all cases would they have necessarily analyzed that. So I think it's definitely something good to clarify with your doctor.

Lysa Buonanno (01:53):

As far as a full genetic testing for them.

Dr. Alice Berger (01:58):

Exactly. So if you were diagnosed with EGFR mutant lung cancer, then you would have had some type of biomarker testing to identify that EGFR mutation. And so it's worth clarifying whether the test that was performed can tell if it's one of these acquired mutations or if it's actually present at birth, in which case it would be present in all of your cells, including say a normal blood test.

Lysa Buonanno (02:21):

And how does a family history of lung cancer increase the likelihood that you may get lung cancer yourself?

Dr. Alice Berger (02:30):

So the main risk factor is if you have a first degree relative that had lung cancer, so that would be a sibling or a parent that had lung cancer. This does increase your overall risk and is something you'd want to let your primary care provider know about in case they would recommend additional screening for you.

Lysa Buonanno (02:47):

Okay. And are there certain risk factors that would increase my risk of lung cancer?

Dr. Alice Berger (02:54):

Absolutely. So we know that, of course, smoking is one of the number one risk factors for lung cancer, but there are also other risk factors like radon exposure, pollution, and family history. And so those all should be taken into account.

Lysa Buonanno (03:10):

And what type of research or treatments are available for those that have an EGFR mutation?

Dr. Alice Berger (03:17):

Right. So EGFR is often targeted with something called a tyrosine kinase inhibitor or TKI, you might hear. And this is a type of small molecule drug that actually binds to the mutant form of EGFR and blocks its cancer causing function. And so in many patients or most patients that are then treated with one of those TKIs, the tumors will regress and they'll get some survival benefit from that. The current standard of care is called Osimertinib or Tegreso.

Lysa Buonanno (03:48):

And are there other known genetic risk factors for AGFR lung cancer?

Dr. Alice Berger (03:54):

So there are other inherited mutations that do predispose to lung cancer. Often these might predispose to many different types of cancers. So one of the main ones is P53 mutation, which causes something called li-fraumeni syndrome and inherited p53 mutations. One of the cancer types you can get is also

lung cancer. There are some other mutations like that called ATM, CDKN2A. Even actually BRCA, the BRCA mutations that can lead to breast and ovarian cancer do lead to an increased risk of lung cancer as well. So these are all things to consider asking for genetic testing if you have a family history of lung cancer or other cancers in your family, and definitely something to ask your doctor about.

Lysa Buonanno (04:43):

So I know as a parent, when I was diagnosed with a lung cancer that has a biomarker, my first thought was, "Is this something I could pass down to my kids?"

Dr. Alice Berger (04:52):

Yeah, absolutely. I mean, that would be at the top of every patient's mind, I would imagine. And in lung cancer for EGFR mutations and for actually the other biomarkers as well, like ALK, ROS1, et cetera, in almost all cases, those are not mutations that you could pass down to your child or that you inherited from a parent. Instead, these are what we call somatic mutations, which occur during your life, probably just by chance or through some exposure. And so they're not in your germ cells that would be used to pass down through your family. And so that's in contrast to mutations you may have heard about, like the BRCA mutations that increase risk for breast and ovarian cancer. Those mutations are inherited, but in almost all cases, EGFR mutations are actually acquired and not inherited.

Lysa Buonanno (05:47):

Oh, great. That's great to know. And how do you see research evolving in hereditary lung cancers?

Dr. Alice Berger (05:55):

Sure. Well, first I'll just add on about the treatments that there were a number of exciting approvals that expanded the number of different drugs that are available for EGFR mutant lung cancers. So while osimertinib is still the standard of care, in settings where a person has progressed or their tumor has progressed on that agent, there are a number of new drugs that are available that actually received FDA accelerated approvals this year. Oh, great. So one of these is something called a TROP2 antibody drug conjugate. This shows promising results. There's also a new type of EGFR inhibitor that is active against a different kind of EGFR mutation that can occur in some individuals that is less responsive to osimertinib. So these are what are called the exon 20 insertion mutations. And so very exciting. Another EGFR TKI was approved this year for that setting. And then as far as like what the future holds for the hereditary EGFR cancers, right now the main hereditary cause of EGFR mutant lung cancers is an inherited variant in EGFR itself, but interestingly, there's also differences in the rate of EGFR mutant lung cancer across different ancestries.

(07:18):

So people of Asian ancestry have a higher risk of EGFR mutant lung cancer than some other populations. And this points to the fact that there are probably other inherited risk factors that we don't know about yet. So this is a big area of active research where we're trying to pin down what might be those other genetic variants that can predispose to this form of lung cancer.

Lysa Buonanno (07:41):

Well, it's exciting to hear about all the new treatments, of course, and that there's still ongoing research. And I thank you so much for helping us unpack all of this and give us all the great information that we have today. Thanks,

Dr. Alice Berger (07:52):

Lisa. It's been my pleasure.

Lysa Buonanno (07:54):

And if you want to learn more about lung cancer, you can visit lcfamerica.org.