

# Mayo Clinic Q & A- Dr. Shanda Blackmon - Lung cancer surgery...

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## SUMMARY KEYWORDS

surgery, patients, shanda, lung, lung cancer, people, called, mayo clinic, lung function, important, removed, cancer, support, treatment, pain, smoking, questions, doctor, survivors, options

## SPEAKERS

Dr. Halena Gazelka, Narrator, Dr. Shanda Blackmon

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**N** Narrator 00:01  
Coming up on Mayo Clinic Q&A...

**D** Dr. Shanda Blackmon 00:03  
It's very important that patients ask those questions, advocate for themselves. Look for minimally invasive options. Not every lung cancer surgery can be done minimally invasively, but if it can, certainly the patient benefits.

**N** Narrator 00:15  
Treatment for lung cancer is constantly evolving. Deciding which combination of treatments is right for you is critical, but it can also be overwhelming. That's why it's important to have a strong support system in place before and after surgery.

**D** Dr. Shanda Blackmon 00:30  
Support groups are very important. It's good for survivors to talk to other survivors who are going through the same thing. But I think, far too often, I see patients who, once they've gone through the surgery, and now they're recovering, they still have moments where they feel very alone.

**D** Dr. Halena Gazelka 00:47  
Welcome, everyone to Mayo Clinic Q&A. I'm your host, Dr. Halena Gazelka. According to the National Cancer Institute, more than 200,000 people in the United States will be diagnosed with

lung cancer this year. If the cancer is confined to the lungs, surgery may be a treatment option. There are several surgical options to remove a portion of lung or even an entire lung. The type of operation used for lung cancer treatment depends on the size and the location of the cancer, as well as how well a person's lungs are functioning. So what can patients expect after lung cancer surgery? Well, here to discuss this with us today is Dr. Shanda Blackmon, a thoracic surgeon at Mayo Clinic. Welcome back to the program, Shanda.

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Dr. Shanda Blackmon 01:33

Thank you, Dr. Gazelka. It's always a great honor to get to chat with you. And I always enjoy being able to help patients with lung cancer. So it's an honor to be here today. Thank you.

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Dr. Halena Gazelka 01:42

It's wonderful. I love speaking with you because I learn something every time. So tell us a little bit about the surgical treatments for lung cancer.

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Dr. Shanda Blackmon 01:50

So you have a variety of different treatments that are options for you. One is surgery. One is radiation therapy. One is potentially, ablation. An ablation is where a probe is placed into the lung and use to either heat or cool or use some energy source to treat the tumor. There are a lot of different other options that are nonsurgical, which are typically chemotherapy, immunotherapy or targeted therapy. When you look at actual surgical options, you have minimally invasive surgery, or open surgery. And the minimally invasive surgery has a lot of different options as well. You could have what we call thoracoscopic, which is where a camera is inserted into the chest and small instruments are placed. Or you could have a robotic approach, which frequently requires four or five incisions and robotic arms go in to do the work. Robotic and thoracoscopic are very similar to one another and both are considered minimally invasive. Sometimes people don't have good lung function, and they can't have what's called a lobectomy, which is where an entire lobe of the lung is removed. And in that circumstance, patients might have something less than a lobectomy done like a wedge resection, which is just like cutting a small piece of the pie out. Or they might have what's called a segmentectomy. A lobe of the lung is broken up into multiple different segments. And sometimes you can just remove one segment when the tumor is small, and you're not worried about having it spread to the lymph nodes. And that gives people a lot of lung function to work with later on.

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Dr. Halena Gazelka 03:47

Wow, amazing.

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Dr. Shanda Blackmon 03:48

A lot of options.

**D** Dr. Halena Gazelka 03:49

I would imagine that it is surprising to some of our listeners that sometimes an entire lung can be removed and you can live without one of your lungs.

**D** Dr. Shanda Blackmon 03:58

Yeah, I think my patients are often surprised if they have a very advanced lung cancer, that sometimes you could remove the entire right lung, which is 55% of your lung function, or you could remove the entire left lung, which is 45% of your entire lung function, and still live. Now the quality of your life after that isn't the same because you probably would not ever be able to run a marathon. But many people could live on just one lung. But fortunately, at Mayo Clinic, we specialize in doing things called sleeve resections, which is if there's a tumor right at the opening to the right or left lung, we can actually just take the lung part where the tumor is and sew the ends back together. That spares lung function. So we might take a part of the airway out and then sew the ends of the pipes of the airway back together, and then spare the rest of that part of the lung to keep the patient from having to have an entire lung removed, called a pneumonectomy.

**D** Dr. Halena Gazelka 05:08

Fascinating. How long does it take for people to recover from lung surgery?

**D** Dr. Shanda Blackmon 05:16

Well, that's a good question. And it depends on what kind of surgery you had from the beginning. If you just had a wedge resection removed, just a small part of your lung, you might be able to stay overnight in the hospital and have a drainage tube that's removed and then go home the next day. However, some patients, particularly patients who may have had an entire lung removed or a sleeve resection, like we just talked about, where that middle part of the airway surgery was done, those people need to stay a little bit longer, sometimes even a week or two in the hospital. And then if people have a complication, they might have to stay even longer.

**D** Dr. Halena Gazelka 06:01

Interesting. So Shanda, you mentioned this a little bit with breathing and need for drainage tubes, but what are the short and long term effects of having surgery on one's lung?

**D** Dr. Shanda Blackmon 06:13

So the short term effects are recovering from those incisions, dealing with that pain and having narcotics, weaning yourself off of that, splinting and trying to breathe, but it hurts a little bit to breathe and using that breathing machine. If you don't take deep breaths, you're at risk for

getting pneumonia. Another short-term effect could be getting a blood clot, which could be quite devastating. If you've already had some lung removed, that blood clot could travel to your lung and cause you to have even more trouble breathing. Infection. If some of the nerves are damaged, that could give you trouble breathing as well or cause pain or discomfort when you wear garments. Blood loss or required transfusion could be a short-term effect. If you have a reaction to that transfusion, however, it could be much worse. And then having air leak from the lung. Whenever we operate on the lung, it's like a balloon. And if you have a little bit of air leaking from that area, you have to have a tube inside your chest pulling that air out, so the lung doesn't collapse. Sometimes the air leak closes up in one day in sometimes it takes more than a week to recover. And then regarding long-term effects, always we're looking at trying to prevent things that cause long-term pain. So that's why I'm a big proponent of minimally invasive surgery. If you have an open thoracotomy and your rib is cut and the rib is spread, the chest is open wide, you're at higher risk for what we call post thoracotomy pain syndrome, which is chronic pain where that incision was. If damage is done to nerves, it could damage the function of your diaphragm, which could give you long-term breathing effects. And then recurrence of the cancer. If you don't have a very good cancer surgery, and sometimes even when you have a very good cancer surgery, the tumor could always come back. So it's very important to minimize the long-term effects of lung cancer, which is to make sure you're in a good surveillance program.

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Dr. Halena Gazelka 08:19

Shanda, when patients are considering lung cancer surgery, what are some of the most important questions that they can ask their physicians?

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Dr. Shanda Blackmon 08:28

So I think one of the most important questions for people to ask their physicians is Can I record this on video? Can I take notes? Can you let me call a family member to be on the phone while we visit? Because when I see cancer patients, frequently, they're so overwhelmed with the diagnosis. And I have older parents as well, and when they come back from the doctor, and I say, well, what did the doctor say? They can't really remember anything. It's so overwhelming. And so probably the best advice I would give patients with lung cancer is to build your village of support around you. And always see if you can have somebody come with you for your appointment, just to help you emotionally deal with things, to help you record what's being said, to help you collect that information, and then to also advocate for you. And then I also tell people to ask their doctor about alternatives to the procedure that's being offered to them. Sometimes people go to the doctor and the doctor says, "Well, you need to have surgery, you're having a lobectomy," and they don't really tell the patient your lung function isn't very good. And maybe the lung surgery would be too traumatic for you. Maybe you'd be better served by having ablation, or having radiation, or having not an entire lobectomy performed, and a smaller surgery performed. It's very important that patients ask those questions, advocate for themselves, look for minimally invasive options. Not every lung cancer surgery can be done minimally invasively, but if it can, certainly the patient benefits. We know those long-term benefits sometimes even extend into survival. And then you always want to ask your provider, what stage is my cancer? Because the treatment decisions that get made before and after surgery are directly related to your stage of cancer. And far too often I see people who had a procedure done, and it wasn't the appropriate procedure for their stage of cancer. So by

asking, what is my stage, it forces the doctors to sit down and look at your situation and stage your cancer and then make appropriate decisions. Another question that I ask people to remember to ask their doctors is, am I a candidate for a clinical trial? So if they are a candidate for clinical trials, perhaps they get a new novel immunotherapy offered to them. There's even a new trial that's been published that shows that some patients don't even have to go for surgery, if they have an incredible response to their treatment, and all of the tumor has gone away. We just monitor those people and don't offer them surgery unless something comes back. There are a lot of opportunities for enrolling into clinical trials, which are, by a great measure, standard of care at a minimum, with potentially something better. We would not be able to offer patients clinical trials unless that that minimum bar of standard of care was met. And then, finally, patients need to ask their doctors if they need genetic testing. If they have certain mutations identified, that can be a way of knowing that they are candidates for targeted therapy, and a driver mutation that's been identified, that helps the patient to know other treatment options out there is very important.

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Dr. Halena Gazelka 12:03

Shanda, I would imagine, as you were discussing all this, I was thinking that wow, that's a lot. And I would imagine that the quality of care must have something to do with the quantity of cases that a physician sees and cares for. Would you say that was true?

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Dr. Shanda Blackmon 12:22

I would say that when you go to have your car worked on and you go to the dealership that deals with your car specifically, and someone who does it every day, they're going to be doing a better job than going to someone who's never even seen that type, make, or model of car. I think we do that in life all the time. And it makes sense to do it in medicine, and in surgery especially. There are a lot of published papers that show that institutions that do a lot at a high volume, have better outcomes and have a lower chance of dying from surgery. And it's not necessarily something that's related always to the surgeon. It's far too often related to the ability of that institution to rescue you if something does go wrong, and how they deal with complications or prevent complications by putting patients on carefully thought out care pathways to prevent some of these things from happening in the first place. Sometimes staying right next to home isn't always the best thing if there's another institution that does it in high volume that can get you home faster.

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Dr. Halena Gazelka 13:33

So the team matters in cancer care.

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Dr. Shanda Blackmon 13:35

The team matters. I would be nothing without my team. If you plucked me out and put me in another place, without my team, I would not have the same results. The team is, I would say, more important than the surgeon.

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Dr. Halena Gazelka 13:52

Shanda, when you are seeing patients, what do you find are some of their biggest worries surrounding care for their lung cancer or having lung cancer surgery?

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Dr. Shanda Blackmon 14:03

One of the biggest worries that my patients have expressed to me is they're frequently worried about being short of breath or being on a ventilator. And so we always test patients to look at their pulmonary function. And we can calculate nowadays, and measure how much lung we plan on taking out, and where we expect them to be after surgery. And if those patients are predicted to have very poor lung function after surgery, then we actually reconsider whether or not we would even offer them surgery in the first place. And we have a very frank conversation about other alternative treatment options for them besides surgery. We don't ever want a patient to go down that pathway and regret having surgery or not feel like they had all the right options presented to them. Another worry that people have is pain. And so we do try to help patients to understand, after surgery, you will have pain no matter what kind of surgery you have. We do everything we can to limit that pain. But we don't want patients nowadays to expect to be completely pain free, because having that expectation puts them at a higher risk for being addicted to opioids. Taking so much narcotic that they aren't feeling any pain means they're also probably not taking deep breaths and they're taking a lot of pain medicine, so we try to find that right balance so that we can control that pain and get it down to an acceptable level, but also help them to recover faster.

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Dr. Halena Gazelka 15:37

Yeah, that's a great point, Shanda. I think a lot of individuals are not aware of all the other side effects that opioids can have like keeping your bowels from moving and things that are important after surgery.

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Dr. Shanda Blackmon 15:47

Oh, yeah.

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Dr. Halena Gazelka 15:47

Yeah, it's a great point. You mentioned a couple of things. You mentioned earlier, having a support system. You mentioned asking appropriate questions. What else can individuals do to prepare for life after lung cancer surgery and to find coping strategies to deal with their worries?

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Dr. Shanda Blackmon 16:07

That's a great question. One of the things that I am so passionate about is support groups, and they're all over the place. Mayo Clinic has Mayo Clinic Connect, which is a blog that patients

can participate in to ask questions. There are support groups that are all over the United States, some are even available by Zoom. Some are in person. Another thing that's been really helpful to patients is there are websites that help cancer patients to communicate with their community, and their family, and their loved ones, to keep them all up to date and express needs. So that people, you know, far too often come up to see a lung cancer patient and say what can I do to help? Well, it actually turns out, but that's one of the worst questions that you can ask a cancer survivor, because someone who's going through cancer probably isn't sitting down and making a list of things. And they're probably very uncomfortable to ask you for help. And so when you are trying to figure out ways to help people, the best thing that you can do is say, I really want to help you; can I go to the doctor with you? I really want to help you, can I make a list of things that need to be done when you go in to have your surgery and get the community to sign up to do it? Or, when you come back from your surgery, we want to organize a meal plan so that you have all your meals covered and you don't have to think about preparing meals. Can we do that? Specific questions like that really take the burden away and allow the survivor to not feel like they need to ask. Also, one thing that I think has been very well done here at Mayo Clinic is identifying people who are at high risk for surgery and putting them through what we call prehabilitation. So if you have a big surgery, and you're not strong enough, frequently, we'll have you go to rehabilitation. And that's where you get stronger before you go home. But sometimes you're not really strong enough to have surgery. And so we put you through the rehab before you do surgery to get in better shape so that you have a better outcome. And I think that's a huge game changer nowadays that we're recognizing that. And then, finally, the most important thing that patients getting ready to have surgery could also do is if they drink alcohol, or smoke cigarettes or use drugs, getting off of all of those before they have any surgery is a very important part of having a good recovery. There's nothing worse than having to have a patient go through withdrawal when they're in the middle of their lung cancer surgery. So we do a lot of work trying to get patients plugged in to get help to stop smoking, to get help to stop drinking, and to get help to come off of the drugs. A lot of times I see people go through treatment at outside facilities and their doctors, meaning well, trying to help their patients, give them drugs like Xanax, Ativan, valium. These are drugs called benzodiazepines. And now I asked my family members of my patients to check the medicine and help us to understand if people are taking those drugs. Because if they just suddenly stop when they come into the hospital, they can go into withdrawal, and that withdrawal can be life threatening. Just to be clear, withdrawal from drugs and alcohol can be life threatening. Withdrawal from cigarette smoking is just incredibly uncomfortable.

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Dr. Halena Gazelka 19:39

I love that advice, Shanda. Can you answer, what I have often heard from patients who say, I already have lung cancer, why should I stop smoking?

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Dr. Shanda Blackmon 19:51

So that's a great question. There are so many studies now that show that if you are actively smoking when you come into the hospital to have surgery, your chances of having a pneumonia, or a pulmonary complication, which means a complication related to your lungs, then you have almost double the chance of having something bad happen. If you're actively smoking. Smoking doesn't just affect your lungs though; it affects your blood vessels. And so it

makes wound healing not good. It also makes it incredibly complicated if patients are on oxygen and smoking, which is very dangerous. So we always try to help people to recognize the benefits of coming off of smoking cigarettes, not just as it relates to lung cancer.

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Dr. Halena Gazelka 20:47

Good advice. That's a great answer. And I loved what you said earlier about how if you're the patient, there are times you just need to accept help. Let people make meals for you. They want to help. Let people drive you to the clinic. They want to help. What else would you tell caregivers family and friends about how they can support an individual through lung cancer treatment and surgery?

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Dr. Shanda Blackmon 21:14

So support groups are very important. It's good for survivors to talk to other survivors who are going through the same thing. But building a village of support around the patient, whether it's through an organized institution like a church, or a school, or an employee group, is always helpful. Families always coming around are very helpful. But I think far too often I see patients who, once they've gone through the surgery and now, they're recovering, they still have moments where they feel very alone. And so one of the things that's most helpful is continuing to reach out to those patients for that whole year after their surgery. Knowing that they're still struggling, they're still worried that the cancer will come back, they're still worried that they might not be able to make it to all of these appointments for follow up. And they still will need help far, far after the time where they have their acute time of surgery. Sometimes patients are going on immunotherapy after the surgery for even extended periods of time. And during that time, they'll need support as well.

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Dr. Halena Gazelka 22:26

I think that's great advice, Shanda. I've been very open about talking about my own treatment for breast cancer last year. And I would say that, right in the moment of diagnosis and having surgery and having radiation, I was all over that. Those were tasks I needed to accomplish. But it seemed to be the months later, where I really needed the support of friends who would continue to ask me, how are you doing now? How are you managing with all of this? It was almost more psychologically important to have support later in my progress.

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Dr. Shanda Blackmon 23:02

Yeah, and I think patients don't always understand that for the five-year period after the lung cancer surgery, there is about a two to two and a half percent chance every year that they might develop a new cancer. And so during that time after surgery, they need to stay plugged in for what we call surveillance, And survivorship is part surveillance and part symptom management. The whole survivorship program here at Mayo Clinic really focuses on treating the whole patient. We have things like massage therapy, we have acupuncture, we have meditation, we have all kinds of resources that help patients to get their life back, get back in shape, get all the parts of their body whole again as they start to heal from this really big



surgery. But one of the things that's so important is to just continue to go back for that survivorship care with continued symptom monitoring and continued surveillance. Getting the surveillance they need, which typically is a CAT scan of the chest every six months for the first two years, and then a CAT scan of the chest every year after that up to five years. That five-year period after the lung cancer surgery is so critically important. And then it's also important for patients to think about whether or not they have something called multifocal lung cancer. Young people who are never smokers, are now at risk for multifocal lung cancer. And we are seeing it more and more. And that means that these people have a higher likelihood of getting another lung cancer and another part of their lung after they've already had one area treated, not because of anything that they've done like smoking or any radiation exposure or radon exposure, which you typically attribute to lung cancer risk, but because of maybe some genetic changes in their body that make them more likely to develop the cancer. So surveillance in both of those groups is critical.

**D** Dr. Halena Gazelka 25:12

Fascinating. What else, Shanda, can lung cancer survivors do to improve their overall health?

**D** Dr. Shanda Blackmon 25:18

Well, I think I'm not great with sleep, but I know sleep is very important. So sometimes doctors recommend things that even they haven't quite championed. Exercise, meditation, journaling, spending some time in gratitude, supporting others, maybe. Probably the most successful recovery from lung cancer that I've seen, and I just have to smile when I think about these patients, that they go through this journey and they finally get to a point where they're so grateful that they have gotten through that acute recovery, that they want to give back. And it is possible to go back into your community, or go through the American Cancer Society, or there's a local community here in Minneapolis called A Breath of Hope. There are all different kinds of organizations that can help you to develop an alliance with another organization that supports cancer patients. And you can become a mentor or a support person for another person struggling with cancer, that might not be in the great position that you're in to provide that care. So giving back, eat well, rest, sleep, exercise, gratitude, journaling, which I think helps you to process what you're going through. All of these things help you to recover a little bit better.

**D** Dr. Halena Gazelka 26:51

And all of those things sound like they are great things for all of us to do. Even if we've never had a cancer diagnosis.

**D** Dr. Shanda Blackmon 26:58

Right. Yeah. Everybody probably needs to be doing more of that.

**D** Dr. Halena Gazelka 27:03



Dr. Halena Gazelka 27:05

Well, thank you so much for being here today, Shanda.



Dr. Shanda Blackmon 27:06

Thank you. Thank you for helping me to think about this and letting me talk to lung cancer survivors and talk about survivorship, which is one of my most favorite topics. Thank you.



Dr. Halena Gazelka 27:19

So grateful to you for sharing your expertise with all of us today.



Dr. Shanda Blackmon 27:23

Have a great day.



Dr. Halena Gazelka 27:25

Our thanks to Mayo Clinic thoracic surgeon, Dr. Shanda Blackmon for being here today to talk to us about lung cancer surgery and lung cancer survivorship. I hope that you learned something, I know that I did. And we wish each of you a wonderful day.



Narrator 27:40

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