

Mayo Clinic Podcast - Dr. Mark Tyson - YouTube Audio Export ...

Mon, 4/19 8:38AM 32:29

SUMMARY KEYWORDS

bladder cancer, patients, bladder, muscle invasive, chemotherapy, disease, cancer, carcinoma, mark, diagnosed, mayo clinic, generally, treatment, people, urine, stage, bcg, vaccine, test, survival

SPEAKERS

Dr. Halena Gazelka, Dr. Mark Tyson, Narrator

- N** Narrator 00:01
Coming up on Mayo Clinic Q&A:
- D** Dr. Mark Tyson 00:03
The vast majority of bladder cancer patients are diagnosed with cancer that's not imminently life threatening, but they tend to be aggressive.
- N** Narrator 00:12
With bladder cancer, early detection is critical for treatment. High-grade bladder cancer tends to spread quickly and can become life threatening. But there are treatment options.
- D** Dr. Mark Tyson 00:22
There are other ways of treating this disease including radiation therapy, so patients can get radiosensitizing chemotherapy, so chemotherapy that makes the radiation more effective. There's a lot of options in treatment of aggressive muscle invasive bladder cancer.

D Dr. Halena Gazelka 00:36
Welcome, everyone to Mayo Clinic Q&A. I'm Dr. Halena Gazelka. May is bladder cancer awareness month, an important time to raise awareness about a disease that affects more than 80,000 Americans annually. Most bladder cancers are diagnosed at an early-stage when the cancer is highly treatable. But even early stage bladder cancers need to be followed because they have a tendency to recur. People with bladder cancer typically need follow-up tests for years after their diagnosis and treatment. Joining us to discuss this today is Dr. Mark Tyson, a urologist at Mayo Clinic. Thanks for being here today, Mark.

D Dr. Mark Tyson 01:13
Thanks for having me.

D Dr. Halena Gazelka 01:15
Well, I'm excited to learn about bladder cancer since we have a whole month dedicated to it. Tell us a little bit about bladder cancer. What does it mean to have bladder cancer? Does it start in the bladder itself? Or does it come from somewhere else?

D Dr. Mark Tyson 01:28
It usually starts in the bladder. The vast majority of bladder cancer patients are diagnosed with cancer that's not imminently life threatening, but they tend to be aggressive. So, bladder cancers, even if they're not life threatening when they're first diagnosed, tend to recur, and sometimes cause the patient to have to undergo numerous procedures and treatments and those kinds of things. There is a subset, probably about 20% of patients, who do have an aggressive and invasive form of the disease that requires more aggressive treatments. And in those cases, it can be life threatening.

D Dr. Halena Gazelka 02:04
What causes people to get bladder cancer, Mark, and who is at risk?

D Dr. Mark Tyson 02:09
We think that about 50% of all bladder cancers are caused by smoking, it comes to most patients as a surprise to learn that because they usually think of smoking as a disease that affects the lungs. But indeed, the chemicals that are inhaled are excreted into the bladder and held into the bladder and before they're voided, and that causes changes to

the urothelium, which really occurs anywhere along the urinary tract from the kidneys all the way down to the tip of the urethra. And so, bladder cancer itself tends to be the most common site of urothelial carcinoma, which is, you know, urothelium is the inner lining of the bladder. But urothelium, like I said, is anywhere along that tract, and so you can develop a urothelial carcinoma, much like a bladder cancer in the kidneys or the ureters, which is the tube that drains the kidneys, or the urethra. So, the smoking is the most important risk factor, but there are others too. We think that particularly patients that were raised in rural communities where there are pesticides in the groundwater, arsenic based pesticides, lots of folks live on wells, they tap those wells, like my parents live on a well in a farming community.

D Dr. Halena Gazelka 03:28
Yes, I grew up with a well as well.

D Dr. Mark Tyson 03:30
Yeah, and so, it could be something in the water supply. It could be something in occupations. So, I've had a couple patients that are hairdressers and work around dyes.

D Dr. Halena Gazelka 03:43
Oh, interesting.

D Dr. Mark Tyson 03:44
You know, one wonders about the association there. We know that folks that work in factories, around textiles, around brake parts, some of these automotive fluids, they're thought to be associated as well. There's a whole host of things that that are that are likely associated to bladder cancer, but we know for sure that the vast majority of bladder cancers are caused by smoking.

D Dr. Halena Gazelka 04:08
It sounds like, it feels to me like we learn all the time of something else that's caused by smoking.

D Dr. Mark Tyson 04:14
Yeah, exactly.

D Dr. Halena Gazelka 04:15
It's probably a good thing to give up.

D Dr. Mark Tyson 04:17
Yeah, bad problem, exactly.

D Dr. Halena Gazelka 04:19
So Mark, what are the signs and symptoms? What would people notice if they might need to be evaluated for bladder cancer?

D Dr. Mark Tyson 04:27
Usually, it's bleeding. So, patients will usually either be told that they have blood in the urine on a test done by a primary care physician or otherwise, or they'll see blood in their urine. And those types of situations require immediate urologic evaluation. This is one of the, I know we'll talk about this a little later, but this is one of the big problems with delays in diagnosis. We think that there's something else that's causing the bleeding and we delay urologic evaluation which can lead to delays in care. So, if bleeding occurs, it does require immediate attention. There are other sorts of things that patients will sometimes notice when they're first diagnosed, and that might be a change in their urinary symptoms. This isn't a common presentation, but frequency and urgency and nocturia, particularly those irritative voiding symptoms, are a little more common with pretty aggressive disease. We'll see this more commonly with some of the variants, not necessarily the routine urothelial carcinomas, but some of the more esoteric types of the disease. Those can sometimes present with dramatic changes in voiding function. But generally, it's bleeding.

D Dr. Halena Gazelka 05:42
Mark, are there screening tests for bladder cancer? And then I want to ask you to clarify something. Does a screening test mean that someone has no signs or symptoms, but they get the test?

D Dr. Mark Tyson 05:53
There's not a widely used screening test. There are some potential urinary biomarkers that could be used for screening and that are being explored in that setting. But there's

nothing right now that one could show up to their primary care doctor and say, I'd like to get a bladder cancer test. Urinalysis is one that we kind of think of most commonly, but there's not really a lot proven with respect to urinalysis. It's helpful, there's blood, but there's a lot of people that have blood for other reasons. And so, that would probably lead to more invasive testing than is necessary. But there are other urinary biomarkers that are more specific, that measure genomic patterns or changes in expression of genes, that could be used in the setting, but they're not validated. So, right now presently, there's not nothing that can be done in the asymptomatic population. It really is just a wait and see kind of approach at the moment.

D Dr. Halena Gazelka 07:01

So, a screening test, you said asymptomatic, that means someone who may worry that they're at risk, but they don't have any of those signs or symptoms we talked about. That's when you do a screening test is that right?

D Dr. Mark Tyson 07:12

Right. And we often will get patients who are worried because a family member has developed bladder cancer and what I what I tell those folks is that they're right to be worried, especially if they live together. Because we know that most of these cancers aren't necessarily inherited germline mutations, something that they inherited from their parents, although they are at times. Most of the time when these cancers run in the family, it's because of shared environmental risk factors. They drink from the same well, they sat in the same car smelling the same secondhand smoke. They did all the same things growing up with the same exposures. And that tends to be the reason why it runs in families. For patients that have significant family histories, I don't think it's totally unreasonable to do a screening urinalysis once a year, although there's no evidence that I could cite to suggest that that's beneficial.

D Dr. Halena Gazelka 08:08

Okay, so Mark, moving on supposing that we have an individual who has some of the worrisome signs and symptoms, maybe blood in their urine, for instance, how do you diagnose bladder cancer?

D Dr. Mark Tyson 08:20

It's not fun for patients generally it requires a scope in the urethra, which can be painful.

D Dr. Halena Gazelka 08:26
So, you mean a camera?

D Dr. Mark Tyson 08:28
Yeah, like a colonoscopy, but it's done through the urethra. Unlike a colonoscopy it doesn't require sedation, but patients will come into the office, they've complained of blood in their urine. We'll set them up for an in-office cystoscopy, which is just a tiny camera that we introduce into the urethra, and we look at the bladder, we look at the urethra, and we detect bladder cancer or urethral cancer in that way. It's very important though, that patients who have had blood in the urine also get what's called an upper tract evaluation. So, we can't see the kidneys and the ureters, and as I mentioned earlier, it's not a common presentation of urothelial carcinoma, but it is a presentation to develop tumors in the kidney or the ureter. And so, a CT scan, and specifically a CT urogram, which is three phases of a CT scan, is important for the diagnosis of an upper tract urothelial carcinoma. So, it's really three tests for gross hematuria. So, blood that you see in the urine, it would be that cystoscopy in the office, a CT urogram. And then cytology is the urine that a pathologist will evaluate under a microscope. Those three tests are the sort of linchpin of bladder cancer.

D Dr. Halena Gazelka 09:44
Now Mark, supposing that an individual is diagnosed, or there are lots of different types of bladder cancer and then how do you treat it?

D Dr. Mark Tyson 09:52
The most common type of bladder cancer is urothelial carcinoma. Over 90% of bladder answers will either be a urothelial carcinoma or a urothelial predominant kind of carcinoma. And like I said, that can happen anywhere along the anatomy. But there are other types of the disease that are important to remember. And those can be what we call variant histologies. Oftentimes urothelial carcinomas that have other types of histologic appearances, concomitant with a urothelial carcinoma, like a micropapillary differentiation or a plasmacytoid. If you if you get diagnosed with those types of cancers, the stakes are elevated, because they're generally more aggressive. And there's a lot of different types of variants. And then there's the rare type of non-urothelial primary bladder cancer, so like an adenocarcinoma, which usually occurs, you know, at the urachus, but doesn't always you can have nonurachal primary adenomas of the bladder, which are pretty rare.

D Dr. Halena Gazelka 11:02
What's the urachus Mark?

D Dr. Mark Tyson 11:04
Oh, I'm very sorry. Yes, so the part of the bladder, the dome, where the bladder connects to the belly button.

D Dr. Halena Gazelka 11:11
Okay, you are getting into a lot of histologic words, meaning the cells under the microscope there that are kind of going above my head, but let's just say there are multiple types and cell types, although there is one type that's most common.

D Dr. Mark Tyson 11:25
Exactly, yeah. We see lots of different types of cancers, particularly at a tertiary medical center where, you know, people are coming in, they'll often be diagnosed with cancers that are rare in that way. And they require, you know, special considerations because they sometimes don't respond to the typical chemotherapies that we use, to the typical intravesical therapy so that sometimes when patients who are not, we haven't gotten here yet, but sometimes patients are treated with treatments that are put inside the bladder, and they sometimes don't respond in the same way that the routine urothelial carcinomas respond.

D Dr. Halena Gazelka 12:07
So, tell us about the basics of treatment. What should an individual expect?

D Dr. Mark Tyson 12:11
So, before you decide on what the best treatment is, we generally will classify bladder cancers according to grade and stage. So, those are the two most important pieces that one needs to know before knowing what to do next. So, after this tumor is diagnosed in the office, the patient is taken to the operating room, and we'll put them to sleep. And then we'll take the tumor endoscopically, so no incisions. We'll put a scope into the bladder, and then we'll resect the tumor. And then we try to get the whole tumor out at that time. Then a couple days later, we get the path report. And that path report really decides what the next treatments are. The vast majority of these cancers will be non-

muscle invasive. So, they're not invading into the second layer of the bladder, but they're just either on the surface or into the first layer. Those treatments generally are intravesical. So, patients will come in for a couple of months, up to a couple of years and get a catheter and treatment put inside their bladder. And then that helps mitigate the risk of cancer coming back or progressing.

D

Dr. Halena Gazelka 13:20

So, Mark the same way that you went in with the scope and in with the device to either biopsy or to cut out the tumor. That's how the chemotherapy is instilled as well?

D

Dr. Mark Tyson 13:33

Exactly.

D

Dr. Halena Gazelka 13:34

Through the urine tube and into the urethra and into the bladder, okay. Yes, that's very interesting.

D

Dr. Mark Tyson 13:38

Exactly. For non-muscle invasive bladder cancer, which is the most common, those patients are going to have intravesical treatment, so treatment put inside the bladder is done in the office with our nurses, a catheter gets put in, the medication gets instilled. And then they generally walk around with it for a couple of hours then void it out. There are a couple of different options in this phase. Generally, for a high-grade disease, so even among the non-muscle invasive designation, there's high grade and low grade, which tells the patient and the provider how aggressive and how likely the cancer is to come back again in the future. And for high-grade disease, it's more likely for the cancer to come back again in the future. So, we try to head that off at the pass with this intravesical treatment. And for those patients, we generally use something called BCG. It's a bacteria, Bacillus Calmette-Guérin, and it's named after a couple of French immunologists who at the turn of the 20th century were studying vaccines for tuberculosis. So, in the late 19th century, we learned that tuberculosis was infectious. And then these two scientists spent a couple of decades developing this bacteria that's closely related to the bacteria that causes tuberculosis, as a vaccine. In the 1920s, we used it as a vaccine in children. There were a couple of safety and political setbacks for a couple of decades but by the 1950s there had been widespread dissemination of the vaccine across the world, and to this day, we use that vaccine as an intravesical treatment. The story behind that it's actually quite

interesting if I may have a minute to explain. Yeah, 1950s and 60s, we learned that this vaccine had anti-cancer properties. And in the 1970s, we learned that it had anti-bladder cancer properties, so a Canadian urologist took it off the shelf and had seen some of the preliminary preclinical data and said, let's just try it in bladder cancer. He had six vaccines, he put six sequential installations over a six-week period into a small number of patients, and there were impressive response rates. Some additional studies were convincing enough that some large federally funded studies were done in the 1980s. And then two products in the early 1990s were finally brought to the market and FDA approved 1991 and 1992. So, we've been using this BCG for decades, and it's been FDA approved in this country for decades.

D Dr. Halena Gazelka 16:03
Well, that's amazing.

D Dr. Mark Tyson 16:04
Yeah, it's highly effective. So, 65% of patients at two years will have a complete response.

D Dr. Halena Gazelka 16:10
It never ceases to amaze me how people figure things out that they work.

D Dr. Mark Tyson 16:14
And for 100 bucks too it's cheap in terms of cancer therapies, it's quite cheap. So, anyway, so for patients with high grade, non-muscle invasive bladder cancer, BCG is generally the best option. Not always, but generally. But there are other options in this phase, like chemotherapies and those kinds of things. BCG is in short supply right now. And so, if you're not able to get it, intravesical chemotherapy is a suitable alternative. And then there's the muscle invasive side. We talked a lot about non muscle invasive, then there's the muscle invasive side. So, if it's stage two or higher stage two, three or four, generally the treatments need to be more aggressive. For cancer, that's confined to the bladder, stage two or stage three, maybe in the fat around the bladder. Those patients are best treated with chemotherapy upfront. Generally speaking, followed by removal of the bladder. Now I'm urologist so there's some bias there, but we think that the best way to cure this cancer particularly in younger healthier folks is to do cisplatin based, is the type of chemotherapy, combination chemotherapy first, three, four cycles, followed by removal of the bladder, and then urinary diversion, which we can talk about urinary diversion if there's time. But, there are other ways of treating the disease including

radiation therapy, so patients can get radio sensitizing chemotherapy so chemotherapy that makes the radiation more effective, followed by concurrent radiation therapy. And there's actually some innovative protocols right now studying additional concurrent medications like immunotherapy in combination with chemotherapy and radiation. So, just there's a lot of options for treatment of aggressive muscle invasive bladder cancer. But generally speaking, muscle invasive bladder cancer requires more aggressive treatment.

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Dr. Halena Gazelka 18:01

Mark, is it common for bladder cancer to spread to other places in the body, to metastasize?

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Dr. Mark Tyson 18:07

It is. At stage two, it's pretty common. We see that about 30% of the time at stage two, stage three north of 50%, and obviously, stage four is disease that has spread to other sites of the body. So, it's an aggressive disease. When it's at that stage. Even stage one it's important to remember. Stage one bladder cancer is invasive. So, a lot of patients will get stage one non muscle invasive bladder cancer and think, well, there's no risk to doing BCG, we should just do BCG. But in fact, I always have that conversation with patients. There's a 15% chance that disease is metastatic at the stage one diagnosis. So, it's a very aggressive cancer.

D

Dr. Halena Gazelka 18:48

You've said a lot Mark. In fact, my head is a little bit spinning. So, I can only imagine listeners. Imagine how confusing this would be to someone who's trying to figure out whether they're getting the best therapy. How does the patient know whether they're getting appropriate therapy and whether they're getting the best therapy that they could for their bladder cancer?

D

Dr. Mark Tyson 19:09

Yeah, that's a very difficult thing to know, even if you're highly medically literate, and you've studied the literature, there are instances where there might be some confusion, particularly in the BCG unresponsive, non-muscle invasive phase, which we haven't even talked about. But I would say second and third opinions are very helpful in that regard.

D Dr. Halena Gazelka 19:33
Do we do that at Mayo Clinic?

D Dr. Mark Tyson 19:35
We do, yes, of course. And we'd be happy to do, I do video visits all the time for people who desire a second, and I know my colleagues across the enterprise do the same. So, we would be happy to give second and third and fourth opinions. But generally speaking, the sort of the initial diagnosis of a non-muscle invasive disease is pretty straightforward. In the initial diagnosis of muscle invasive, so stage two is pretty straightforward. And stage four is, for the most part pretty straightforward. There are certain instances where we may not be able to do the typical thing that we try to offer in those phases, in which case that might be where one would benefit from kind of a second opinion.

D Dr. Halena Gazelka 20:15
And I know Mark, that a lot of cancers, especially specialties, patients will choose to come here sometimes either to initiate their therapy or to get a second opinion, and then often go home to complete that therapy. Is that true in this situation, as well?

D Dr. Mark Tyson 20:32
Yes, the vast majority of our patients will complete their chemotherapy locally. They'll see our medical oncologists and get a good recommendation for the type of chemotherapy and the number of cycles, and then they'll go back home to get that. And a lot of the patients that we treat for non-muscle invasive disease will get their BCG or their intravesical therapy at home as well. And then come back for periodic surveillance or a lot of patients that just check in every six months just to say this is the recent, and they check in by video. This is the recent developments, I'm doing well, and then I'll say, okay, here's what's on the horizon and what you can anticipate, you know, plan A, plan B and Plan C. And then if any of those things happen, just call me and we can sort it out.

D Dr. Halena Gazelka 21:20
Very reassuring to patients, I imagine to have more heads together thinking about their diagnosis and their process that they're going through.

D Dr. Mark Tyson 21:30

I hope so. Yeah, I hope so.

D Dr. Halena Gazelka 21:33

Mark, tell us about survival rates for bladder cancer.

D Dr. Mark Tyson 21:37

At the stage zero, so we're stage one, you know, the non-muscle invasive stage, it's very good, the vast majority of patients are going to survive their disease. These are typically diseases that recur, but don't necessarily recur in a life-threatening fashion. So, they're more like a nuisance, like a skin cancer in that respect. The whole skin has been exposed to the sun, and it's just a matter of time before another one somewhere along the skin develops. And the same is true for bladder cancer. For most patients with non-muscle invasive disease, they tend to recur over time, but tend to not be life threatening. For muscle invasive disease, if the patient has a good response to chemotherapy, and when we remove their bladder and find no residual disease, that portends an excellent survival. North of 85% of those patients are going to survive their disease. But if they don't have a great response to chemotherapy, and there's persistent muscle invasive disease, then the survival is a little less robust. Patients in that setting will experience a five-year survival somewhere in the ballpark of 60 to 65%. If patients are metastatic at the time of cystectomy. Generally, in which means the cancer has spread, we generally will put them on additional therapy after removal of the bladder. And I have lots of patients who've been diagnosed with lymph node positive disease. So, they are metastatic, the cancer has spread to the lymph nodes. And they'll be on immunotherapy for years with no evidence of disease progression. So, it doesn't necessarily portend a guaranteed adverse outcome. But generally speaking, when the cancer has spread, survival is poor.

D Dr. Halena Gazelka 23:21

Mark, patients often want to know, do we provide any clinical trials, or do we have any ongoing clinical trials at Mayo Clinic for bladder cancer?

D Dr. Mark Tyson 23:30

Absolutely, there's a robust clinical trial portfolio across the entire enterprise. My colleagues in Florida, in Rochester, and here in Arizona, and I have assembled a really interesting group of clinical trials, studying everything from chemotherapies prior to surgery, to new drugs that we're adding concurrently with radiation, to new therapies for non-muscle invasive bladder cancer, new types of BCG, new approaches to low grade

diseases. We can even talk about low grade, new approaches to low grade diseases. We've got clinical trials in the space where people aren't eligible for chemotherapy or aren't eligible for surgery or radiation. We've got clinical trials and people who have progressed on chemotherapy across the entire enterprise is essentially a trial for every space that exists with this.

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Dr. Halena Gazelka 24:28

And Mark, we were talking about clinical trials, which basically means that it involves patients. But a lot of research goes on, we call bench research, that goes on. Maybe it doesn't involve patients, it's on the cells or other aspects of bladder cancer. Do we have research studies like that at Mayo as well?

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Dr. Mark Tyson 24:47

We do. We have biobanks where we do urinary biomarker research. There's space being done in the urinary microbiome. Research being done in the urinary microbiome space. Then we have PhD colleagues across the enterprise as well, that collaborate on correlative type research or translational aims. The clinical trial portfolios are definitely more robust than the bench research. But there's definitely bench research being done.

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Dr. Halena Gazelka 25:23

Mark, at Mayo Clinic, we always say that the needs of the patient come first. And we believe that, and we live that, and we treat patients that way. We've become aware that there are, you know, ongoing disparities related to many aspects of healthcare where people are not receiving equitable care or where the diagnosis may be more common in one group or another. Are there disparities related to bladder cancer that we should be aware of?

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Dr. Mark Tyson 25:53

There are. The most pressing one, I think, comes with gender disparities. So unfortunately, even though men are more commonly diagnosed with bladder cancer, women are diagnosed with worse disease, and they have worse survival than men. And there are lots of reasons for these observations. There are higher rates of urinary tract infections in women and that can mimic symptoms of bladder cancer. So, there may be delays in that regard. There's lots of reasons for bleeding, particularly post-menopausal bleeding in that population, which may confound the urologic evaluation or delay the urologic evaluation. So, unfortunately, there are survival disparities that are observed in women as a result of

some of these issues. There are also income related disparities, particularly a decade ago, there were more income related disparities with respect to access to care. But we know that patients living in poorer counties present with more advanced disease, probably from delays in their care. And then lastly, we know that there are some racial disparities as well. Hispanics do worse than non-Hispanics in terms of survival. African American men and women, particularly have a higher mortality risk, particularly in that late-stage disease group, they have a higher rate of non-urothelial carcinoma. So the variant histologies that we talked about, higher grade, higher stage, compared with the Caucasian cohorts as well. So, there definitely are disparities to be cognizant of. In general, in my experience, if we can get those patients on therapy quickly, the response rates seem to be as good and with prompt attention, survival expectations can be just as good.

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Dr. Halena Gazelka 27:53

Anything else that you'd like our listeners to be aware of today?

D

Dr. Mark Tyson 27:57

There is something that we didn't cover that I think is really important. And that is when we remove the bladder, what do we do with the urine? A lot of times patients will say, well, what's going to happen to me after you've taken out my bladder, because that's how I void. And that's an exciting area of research too that's of special interest to me, because for the longest time, we haven't really had good data to present to patients to say, okay, well, here are your options, and this is what I think is best. But what oftentimes, I was telling my wife this last night, oftentimes what we think is best isn't what's best for patients. It's really what patients think is best, and we need to arm patients with better data to make those decisions. But there are two predominant options in this space, really three, but the third one is not commonly performed. There's the takeout the bladder and build a bag, like a urostomy for urine. There's the take out the bladder and then insert a new bladder, a Neo bladder, we call that orthotopic. bladder substitution, it just means you're putting a bladder substitute back where the old one was located. And then there's a pouch, a continent catheterizable stoma, and that's where a patient will have a stoma at the level of the skin and catheterize it to empty it. So, it's mostly continent, but there can be issues related to leakage with that system. But suffice it to say, the conversation that goes into this decision-making process is long and arduous, oftentimes requires a lot of months to think about it as patients on chemotherapy. They're doing research talking to patients. What I would encourage patients to do is to seek out people who've already had the surgery. Because the vast majority of things that a doctor thinks are important, really aren't the things that patients identify as being important. And so, sometimes talking to somebody who's been down the path of a new bladder can speak to the challenges of

new bladder like incontinence, and patients who've been down the path of ileal conduits for you, you know, you have a stoma, they can speak to the challenges of ileal conduits. And so, the last thing I would just impress upon our listeners is don't hesitate to reach out to the patients. And you can find these patients at places like in our practice, we often have patients who are volunteering to do that. But we also have really good organizations like the Bladder Cancer Advocacy Network, that house a repository of patient contact information that can help with these decision-making processes.

D Dr. Halena Gazelka 30:34

I'm still stuck on that you find you're an exciting. I love to hear you say that because you really do not realize how much we take the very simple things of life for granted until they're not so simple anymore, and how we urinate is a big deal to someone who would lose the ability to do it naturally. So, that was great.

D Dr. Mark Tyson 30:56

Yes.

D Dr. Halena Gazelka 30:58

Thank you Mark so much for being here today.

D Dr. Mark Tyson 31:01

Thank you for having me. I'm delighted to participate. I really appreciate the opportunity to share the exciting things going on at Mayo Clinic. And so, I hope that this helps your listeners with their journey with bladder cancer.

D Dr. Halena Gazelka 31:17

Well, one of my favorite things about doing this is all the wonderful things that I learn and the wonderful providers that I get to meet. So, thank you for being here. We really appreciate that.

D Dr. Mark Tyson 31:27

It's nice to meet you too.



Dr. Halena Gazelka 31:29

Our thanks to Dr. Mark Tyson, urologist at Mayo Clinic in Arizona for coming to speak with us today about bladder cancer. May is bladder cancer awareness month. So, be aware, and if you need to seek help for signs or symptoms of bladder cancer or know someone who does, please do that. I hope that you learned something today. I know that I certainly did. And we wish all of you a very wonderful day.



Narrator 31:54

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