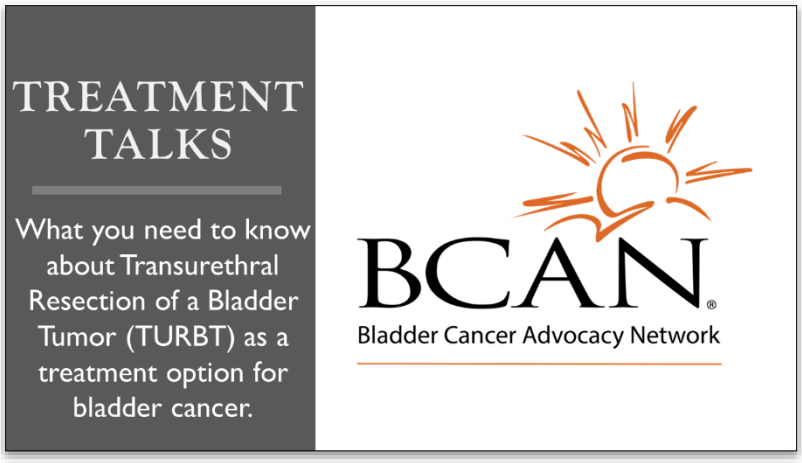
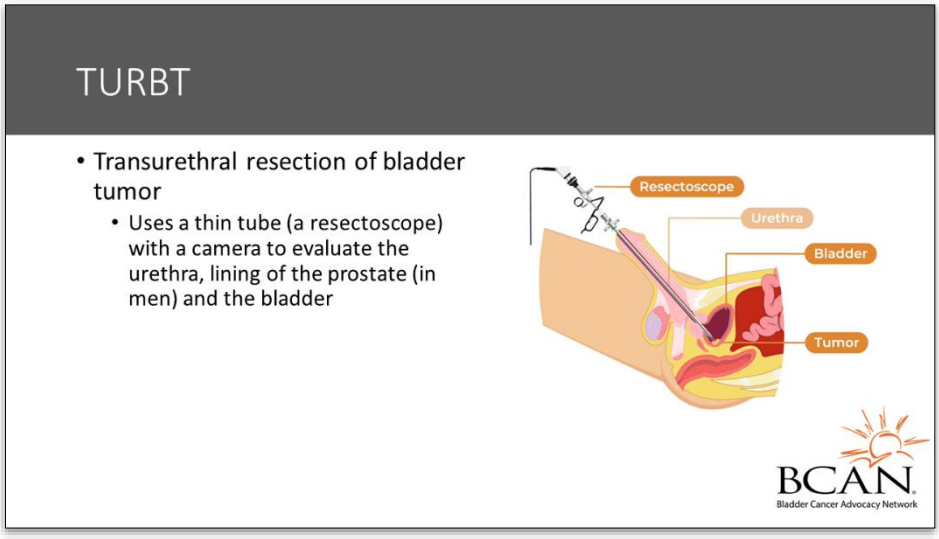


Stephanie Chisolm:

BCAN's introduction of the Treatment Talk physicians and patients program is really designed to help you really understand more about the TURBT experience. Today, we have a special guest who's with us from the University of Texas Southwestern Medical Center, Dr. Yair Lotan. Welcome, Dr. Lotan, It's great to have you here. And then we also have advocates, Lori R. and Ron K., who are also here to share with you their experience with a TURBT. So, Dr. Lotan, a TURBT is a surgical procedure that's used to diagnose and treat visible bladder cancer at the same time. And we're delighted to have you here to explain and I'm going to turn off my camera and let you take over in terms of showing your slides and talking us through the procedure.

Dr. Yair Lotan:

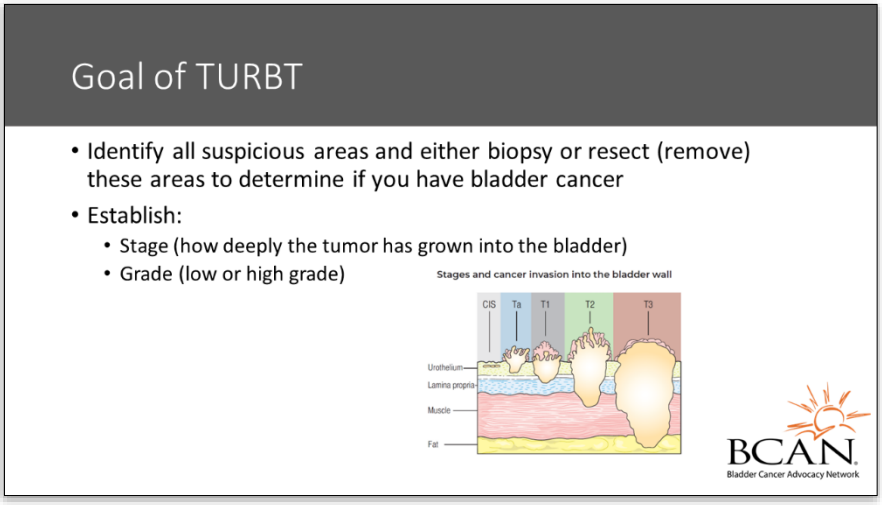
Great. Thank you. First of all, I appreciate the opportunity to speak with everybody and hopefully, you'll find this informative. It's really meant to be fairly social. And in the sense that really, I'm mostly here to try to give you some background and then to answer questions, and really any type of question is fine. And I think it's this is important conversation because, for the urologist, it's such a common procedure that we really treat it as kind of a minor surgery. And yet for many patients, this is a major surgery and also results in a lot of anxiety especially since we're talking about diagnosing cancer and the implications of the finding of the TURBT on how your cancer will be treated. So hopefully, we'll take away some of the unknowns about this and that maybe will help you understand a little bit of what you may have already had or might have in the future.



So some of the aspects of the talk will be a little technical. I'm trying to teach you a little bit about the equipment that we have. This is obviously an atomic picture of a man and

the resectoscope is really our tool that we use to go into the bladder to evaluate, first of all, what the suspicious areas are. There's a camera and a light source, and we can look in through the urethra, look at the prostate in men, in women you go straight into the bladder and we can look around and see if there are any cancers there. Next slide.

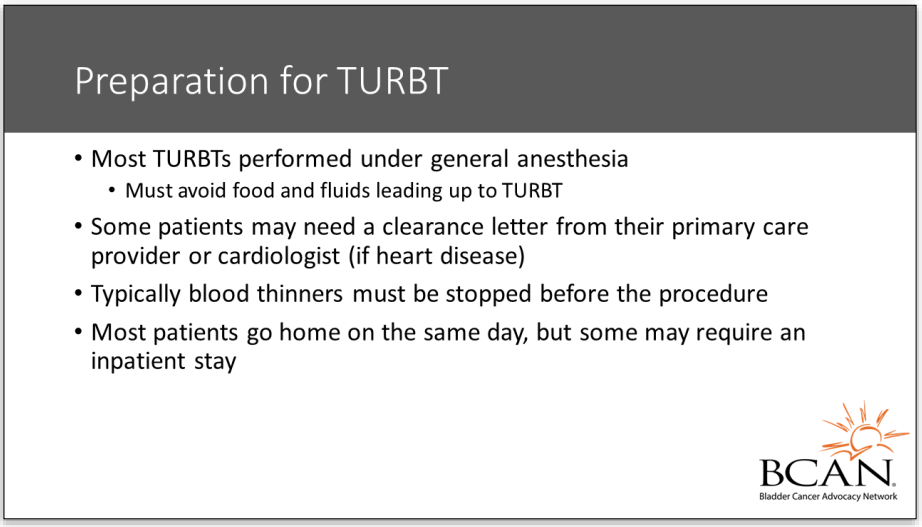
Dr. Yair Lotan:



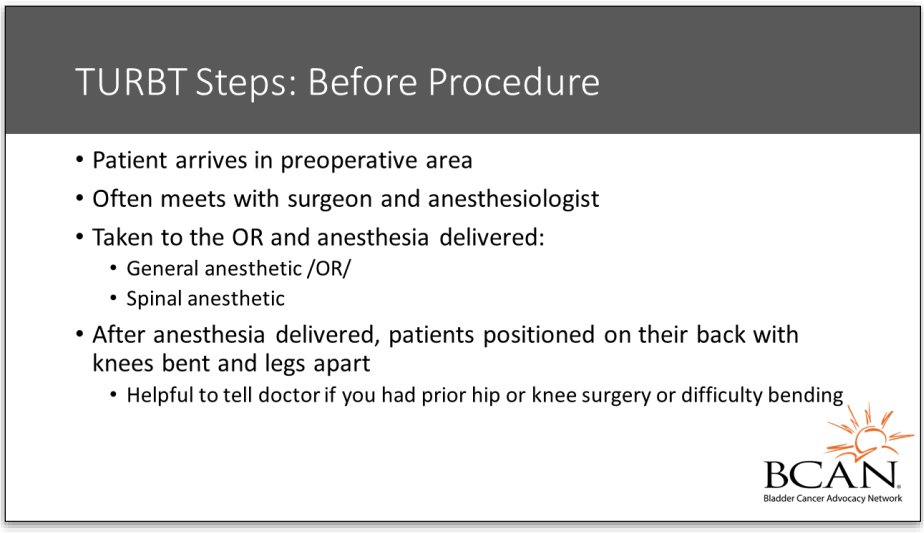
The real goal of the TURBT is to determine the extent of cancer if there is cancer at all by removing tissue, either using biopsy forceps or cautery loop. And the goal is to find out A, if you have cancer, and if you have cancer, how aggressive it is. Is it invading deeply into the wall of the bladder, or is it in what grade it is? Cancers of the bladder arise from the lining which is called the urothelium. And this is a lining that starts in the kidney, goes down the ureters which are the tubes that carry urine from the kidney to the bladder, go to the bladder, and then it lines the urethra. And when the cancer starts in the lining, it can stay in the lining, or it can invade under the lining into a layer called the lamina propria which is kind of a thin connective tissue with some blood vessels or it can go into the muscle, which is really the function of the bladder is a muscle that relaxes to store urine and then squeeze to empty. And then surrounding the bladder is fat and we rarely ever will scrape deeply enough into the fat because then that means we went through the whole muscle layer and we might have a hole in the bladder which is what we want to avoid. The grade of the cancer is really what the cancer cells look like under a microscope. If the cells in the tumor resemble what normal lining would be, but maybe more cells than you should have, or some disruption in the architecture, then they're considered low-grade. But if the cells look very abnormal in appearance, or maybe they're dividing a lot more than they should, they're considered high-grade. And that's something that the pathologist can tell us with a microscope we can't tell visually.

Dr. Yair Lotan:

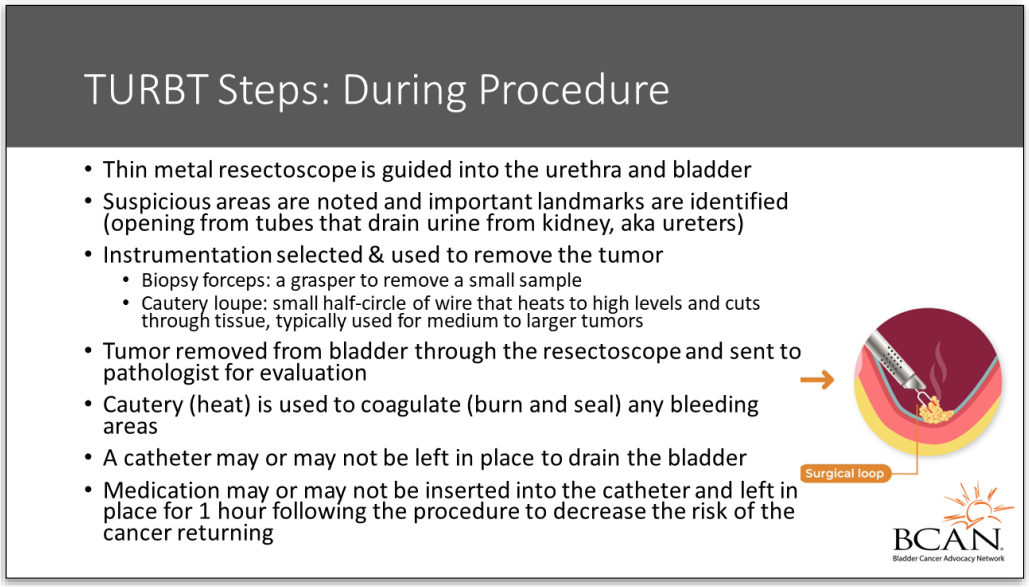
Now, TURBT is a surgical procedure. Generally, it's performed under general anesthesia which means you're completely asleep. And in many cases paralyzed so there's a breathing tube breathing for you. Because it's performed under anesthesia then you're going to get instructions to fast and most people can't eat any solid food or liquids with milk or dairy for six to eight hours before surgery. And you'll get direct instructions about that. Sometimes it will allow some clear fluids or coffee or water with your medicine, but you're going to get some instructions from your urologist or from your anesthesiologist before surgery on how long you have to avoid foods. Many of our patients are older, have other medical problems, and sometimes before we recommend general anesthesia, you're going to have to get a clearance letter from your primary care physician or your cardiologist if you have a history of heart disease, and we'll inform you of that typically beforehand, or when we schedule a surgery. Blood thinners need to be stopped prior to surgery. And it depends on the blood thinners. Some blood thinners have to be stopped five to seven days ahead of time. Some have to be stopped two to three days ahead of time. This is typically done as an outpatient procedure. Most patients go home same day, but some patients are monitored overnight to make sure there's no evidence of bleeding or because of issues with anesthesia and there's some concern about sending home the same day. But the vast majority of patients will go home the same day. That means you need a ride. And so make sure you don't drive yourself or take a cab. Most hospitals don't want you to go home in a cab on the way after a surgery.



The steps, typically you'll come to the hospital two to three hours before surgery. Generally, I will meet with every patient right before my surgery and my anesthesiologist will meet with them, in most hospitals I suspect that's a case. You'll go to the operating room, you'll get an anesthetic. In most cases, as I mentioned, a general anesthetic, rarely a spinal anesthetic. After anesthesia is delivered your position usually you're lying on your back with your knees bent and legs apart. So there's room for us to maneuver and place



a cystoscope or resectoscope. So if you had prior hip surgery or knee surgery, or have difficulties bending your knees or your joints, you may want to let your doctor know just so it's not a surprise the day of surgery.



So again, in a moment, we'll watch a video and we'll let you know before we turn on the video, I don't think these tend to be particularly problematic for people to watch, but if you're squeamish, we'll let you know so that the video is going to come on. But as mentioned, we put a resectoscope which is basically a hollow sheath with a camera and a lens and a light source. And we look around the bladder and make sure we find the openings from the ureters where the kidneys drain. So we don't injure that. We'll look around to see any signs of any tumors. Then we have a couple of different instruments to remove cancer. We either have biopsy forceps, which are just graspers, which remove relatively small pieces of the tissue. Or we have a cautery loop which is a half moon which you'll see on the video.

Dr. Yair Lotan:

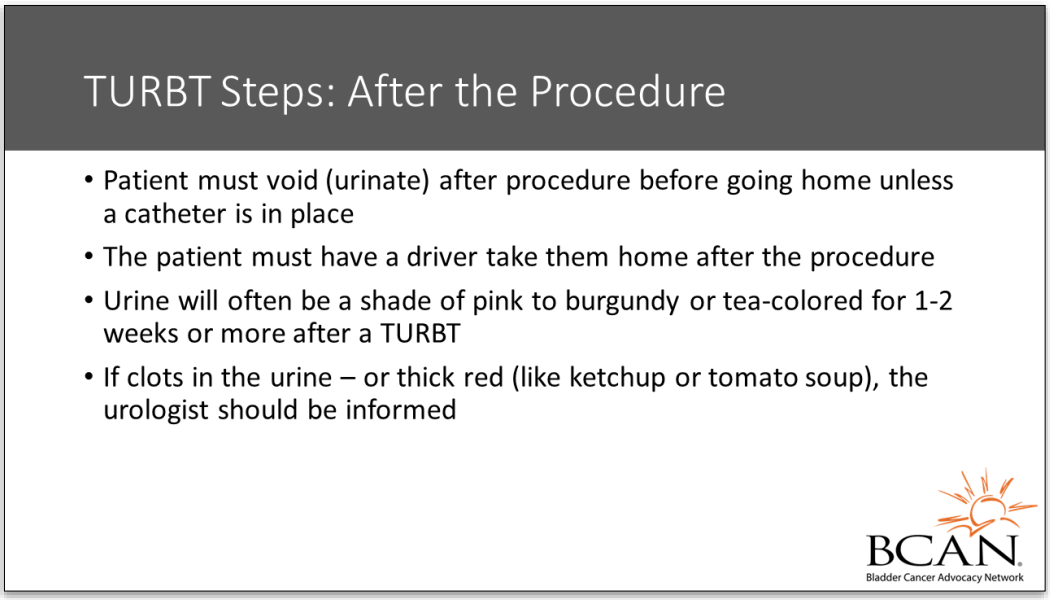
And it uses heat or an electricity to cut through tissue. And once we remove all the tissue, we'll coagulate burn the area so it doesn't bleed. Some cases we'll leave a catheter and sometimes we don't know if we're going to leave a catheter until after we do the resection because we want to determine how deep we resect and whether or not there's a big raw area. We may leave a catheter for a few days to let the bladder heal. And sometimes depending on the aggressiveness of the cancer and what we find we may actually put chemotherapy in the bladder for an hour after surgery to decrease the risk for cancer coming back. And that's very dependent on the type of cancer you've had. All right, next slide. Okay. This is important disclaimer that if you think you might be uncomfortable watching a video, I promise you it's not particularly bloody video. I want to note that many of you may have watched your own cystoscopy, it's very similar. But if you do feel like you're going to be uncomfortable, then I'll let you know when we start the video.

Okay. Yeah. A quick transition here to the video. (This video is proprietary material and is unable to be linked here, but the commentary of the video will remain) Okay. So what you're looking at here is a very typical bladder cancer. It has a typical papillary appearance. This one is kind of broad, but and when you look at the adjacent bladder, you can see that the normal lining doesn't have any growth to it. But the tumor itself is kind of broad. Parts of it are kind of more carpeting, and this is our cautery loop and it has sort of this half-moon. And our job is to scrape out this tumor without making a hole in your bladder. And so you're going to see that we turn on the electricity and the cautery loop is basically moving towards us. And we're trying to gently shave the cancer off of the bladder in a way where we're not going too deeply and hopefully in a way where we can control the bleeding as we go. And so we're going fairly methodically here and okay. And this is, we skipped ahead. I don't want you to watch all five

minutes of this. And so, as you can see, oh, we'll watch a little bit more of this, if it's okay. The goal is at some point to get comfortable that you cut deeply in enough so that you're under the tumor. And here you can see that there is some areas that we've already removed the tumor completely and cut below what we think is to the wall of the bladder. One of the challenges for us is that once you cut off the tumor, you can't always distinguish the layers. It's not light the nice cartoon diagram where the muscle looks different than the lamina propria. And the one thing that you can tell is if you're cutting into fat, but you can't always tell exactly how deep you are, especially after you cauterize the area.

Dr. Yair Lotan:

And that's sort of the art of the resection is we want to make sure we remove all the cancer, but again, we don't want to make a hole. And this cautery loop, as you can see we can cauterize the areas so it doesn't bleed. And, and you can see that I've already resected the vast majority of this tumor and just cleaning up areas that I feel like maybe they're not completely as deep as I would like, but again, for the most part, we always think we can come back and get more tissue if we need to, it's hard to fix the hole and these are the three pieces, and we're going to remove those later and send them to pathology. All right. So hopefully nobody got too squeamish, but that's generally what a TURBT looks like.

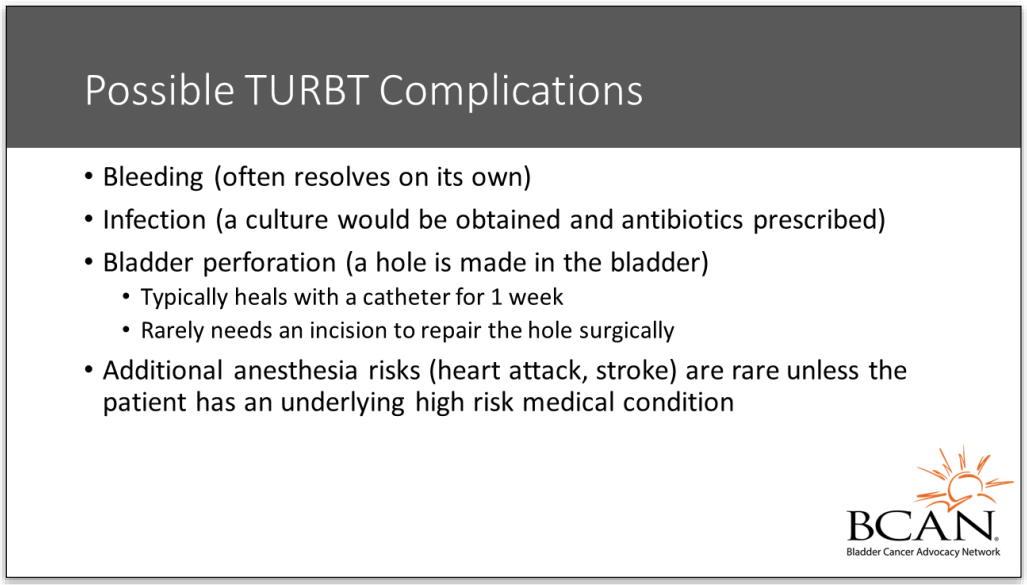


And I think it's kind of nice to be able to see what those look like to have a good idea. So if we don't leave a catheter, we want to make sure you can urinate after the procedure so that you're less likely to find out later that you can't urinate, need a catheter and have to come back to the emergency room. You do need a driver after anesthesia. Now, even though when we finished the surgery, you could see there wasn't really a lot of active bleeding. And for us, everything looks real good. The problem is that for us, your bladder is paralyzed and not squeezing, but once you actually start urinating, you're actually squeezing your bladder and increases the pressure and you have this raw area and it might ooze a little bit. And so it's normal to see the urine look a little bit pink could be, look, burgundy can look tea-colored, that can actually happen for about a week or two after surgery.

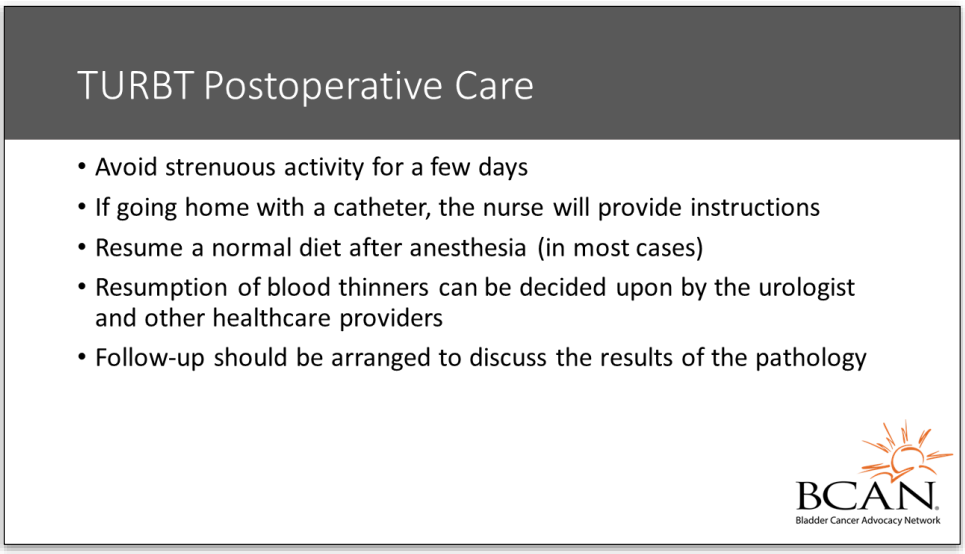
And sometimes patients will call me and say, then they'll send me a picture of what they think looks like fruit punch, or maybe it looks like a merlot and they say, "Is this okay?" And unless it looks like ketchup or you see a bunch of clots or you can't urinate, I usually just tell them, drink more fluid and it'll clear up. But if you see clots in the urine or you can't urinate, that's when you need to let us know and you have to come in and sometimes we have to irrigate out the bladder and usually, we'll wait it out and it'll be fine. And once every year or two, I'm going back to the operating room to cauterize areas that I thought I did a good job in the first place. And it turns out that it was something started bleeding that was some small blood vessel, and it's not stopping on its own. And I have to go cauterize it again.

Dr. Yair Lotan:

So what are the complications with bleeding? Usually stops on its own. Infection, and usually you'll get a urical before surgery and you're given antibiotics. Some people give antibiotics after surgery to reduce the risk for infection, but that is a risk. Bladder perforation is probably the thing that we are most afraid about. If you make a hole in the bladder, we don't have a needle and threat to be able to sew in the bladder. Usually, we can just leave a catheter and the bladder will heal itself. The body is very good about healing things. Very rarely, you actually have to make an incision and close the bladder. We all have a few of those stories after 20 years. I think I've had to do that three or four times. That's okay. That's once every five years or so when you do something a lot, but it's obviously disconcerting for everybody involved. And usually, you end up being in the hospital for a few days. Then there's also risk for anesthesia. And those are rare. There's usually not a lot of bleeding, not a lot of fluid shifts, but anytime somebody who is normally on blood thinners to prevent a stroke comes off a blood thinner. That's a risk. And it's something that we obviously are worried about and something to consider anytime you go under any anesthetic for surgery.



So what I usually tell of my patients, I tell people, take it easy. If you think you're going to do something strenuous, probably don't do it. I don't know that you need to worry about how much something weighs or not. But if you're thinking twice about whether or not it's too much, it probably is. You really want to give a couple of days for bladder to heal and you want to make sure that you don't do things that might lead to bleeding.



If you go home with a catheter, you usually get instructions about how to take care of it and when it should come out. And normally once you get over the aesthetic, you can go back to your normal diet. There's not really usually dietary restrictions. Going back on blood thinners is really up to the urologist. I usually tell people, wait two or three days and make sure your urine stays clear before you can go back on the blood thinner and generally you should have a follow-up arrange to go over the pathology report.

I usually will give a patient a follow-up appointment 7 to 10 days after the procedure. Before the surgery even happens some urologists will set up a follow-up after they do the surgery but you do want to know what the pathology report showed. Good. Well, that was a formal presentation. I think Stephanie is going to lead some of the discussion with the patients.