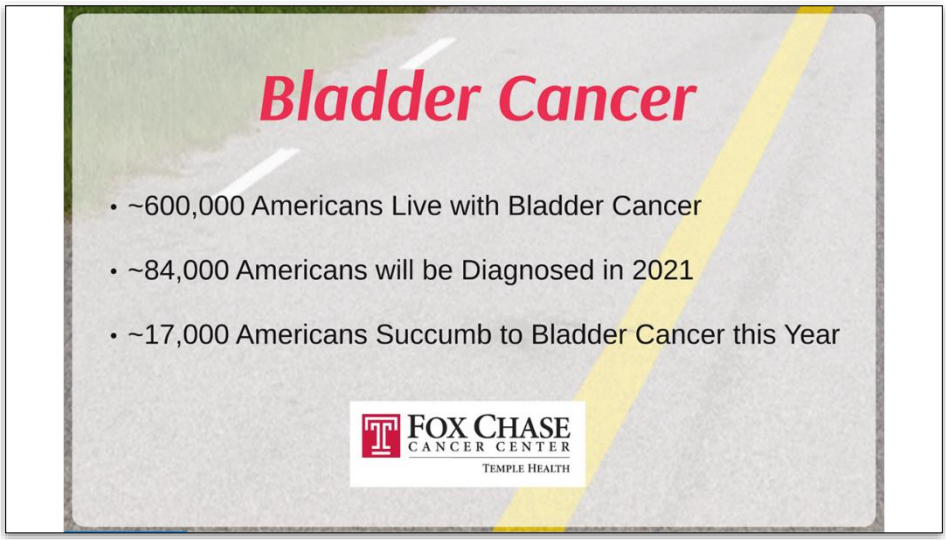
Introduction

Stephanie Chisolm:

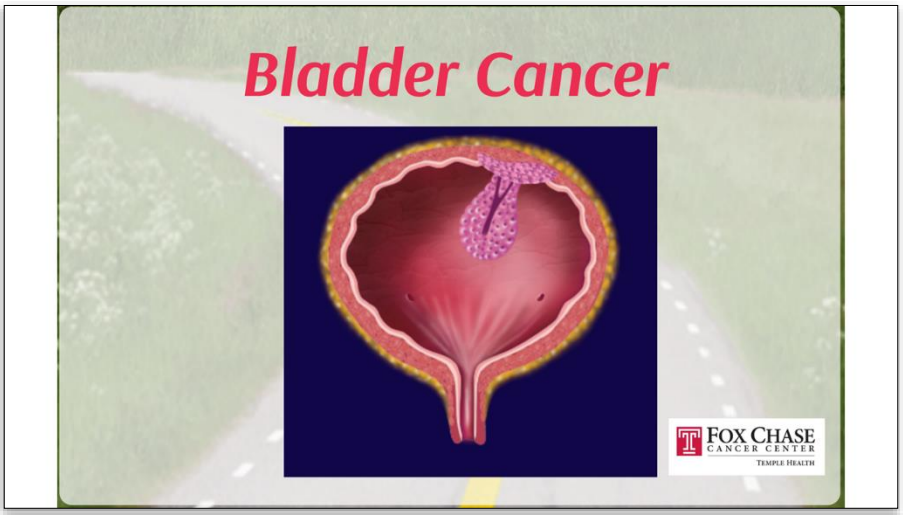
Welcome to Treating Bladder Cancer, Bladder Removal Surgery Part 1: Radical Cystectomy Options. My name is Stephanie Chisolm and I'm the Director of Education and Research at BCAN. A radical cystectomy is the removal of a bladder to prevent the cancer from spreading to other parts of your body. It's often recommended for treatment for someone who's been diagnosed with bladder cancer. Today, we are delighted to have the chief of urology at the Fox Chase Cancer Center, Dr. Alexander Kutikov, with us. He's going to help you learn more about what bladder removal is, when it's recommended, how it's done. One of the areas Dr. Kutikov will address is explaining the options to create a urinary diversion to allow for safe removal of the urine as part of that bladder removal process. Welcome, Dr. Kutikov. It's a pleasure to have you here.

Dr. Alexander Kutikov:

The pleasure is all mine. Thank you, Stephanie, thank you BCAN for the invitation. A real privilege to be here and to share my thoughts about radical cystectomy, one of the biggest surgeries that are done in surgery and really a life changing one. But as hopefully I'll communicate, it doesn't have to be one that prevents folks from continuing their lives and living full lives. We're going to talk about life after bladder removal and what bladder removal really entails. This is a journey and bladder cancer is a journey regardless of which path one takes. But bladder cancer, especially when the bladder is removed, is a long journey and is a hard journey. Bladder cancer

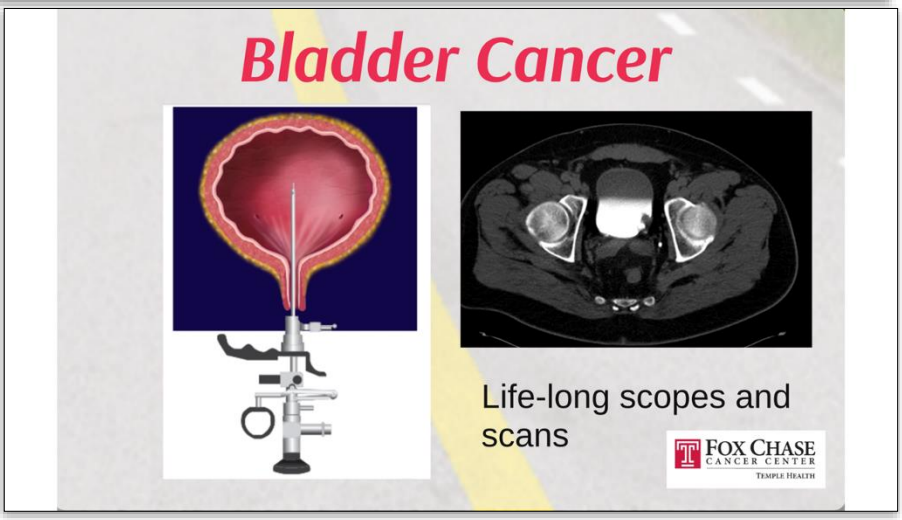


affects over half a million Americans and every year about 84,000 get diagnosed, but some 600,000 live with bladder cancer. Unfortunately, around 17,000 succumb to bladder cancer every year.

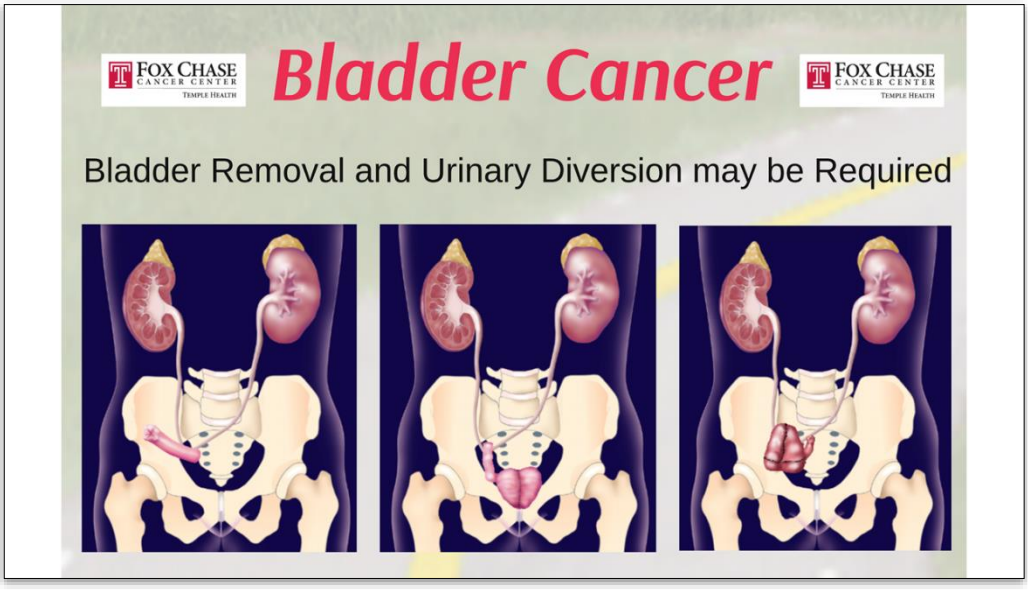


Bladder cancer starts in the inner lining of the bladder, in the mucosa. It's like the inner lining of your cheek, and it takes many forms. There's aggressive types, the high-grade types, there's non aggressive types, the low-grade types.

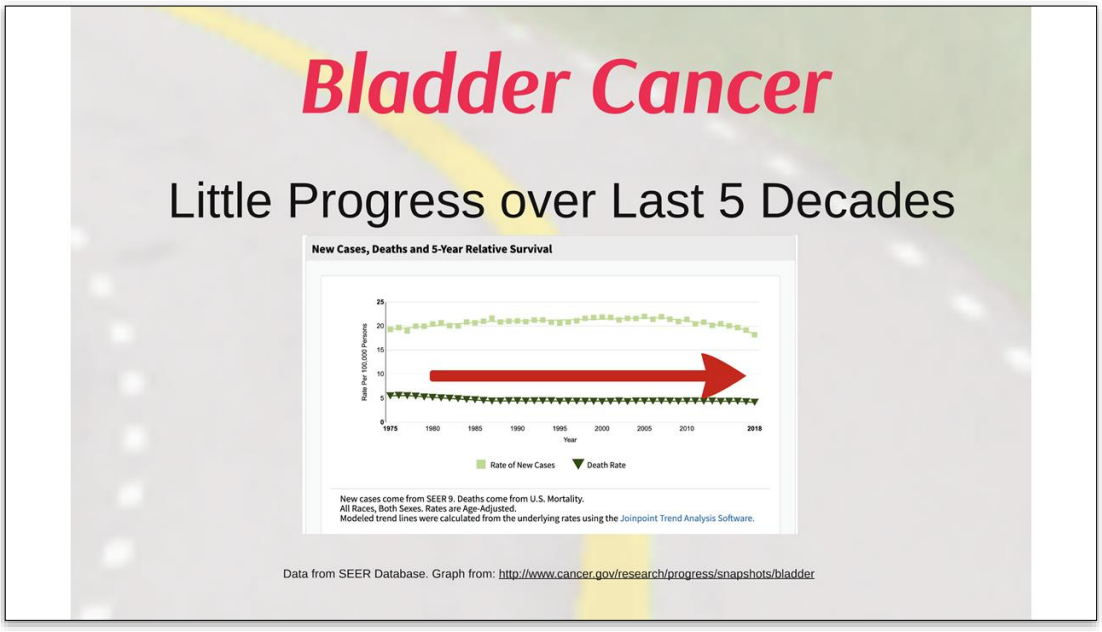
Depending on the form that your bladder cancer takes, it really drives further management. Now, regardless of which path one takes, it's challenging. For folks, the majority of folks who don't have what's called muscle invasive bladder cancer where their bladder cancer stays on the inner surface of the bladder, there's lifelong scopes and scans and one has to carefully monitor this disease. The community of providers is working very hard on trying to better understand how to calibrate that monitoring and how to make people's lives easier by having them have the scopes not as frequently as we currently do it. But although there's been progress, there's still lots of challenges.



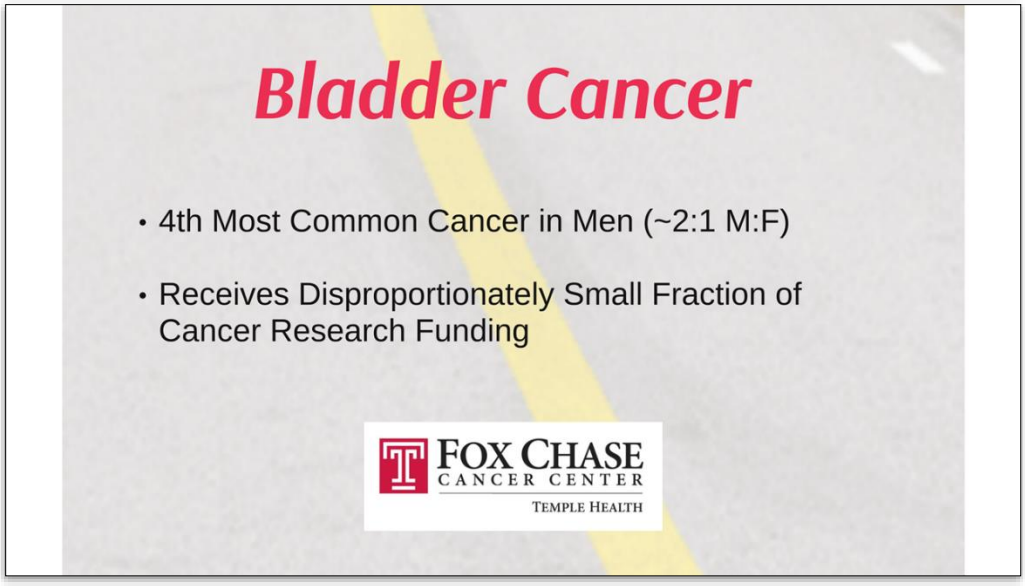
Then there is bladder cancer removal. Bladder cancer, about 25% of patients have muscle invasive bladder cancer where the bladder needs to be removed and a urinary diversion is necessary. This is a space where many clinical questions



remain unanswered and there is really a giant need to improve treatments and improve paradigms of care that we currently have now.



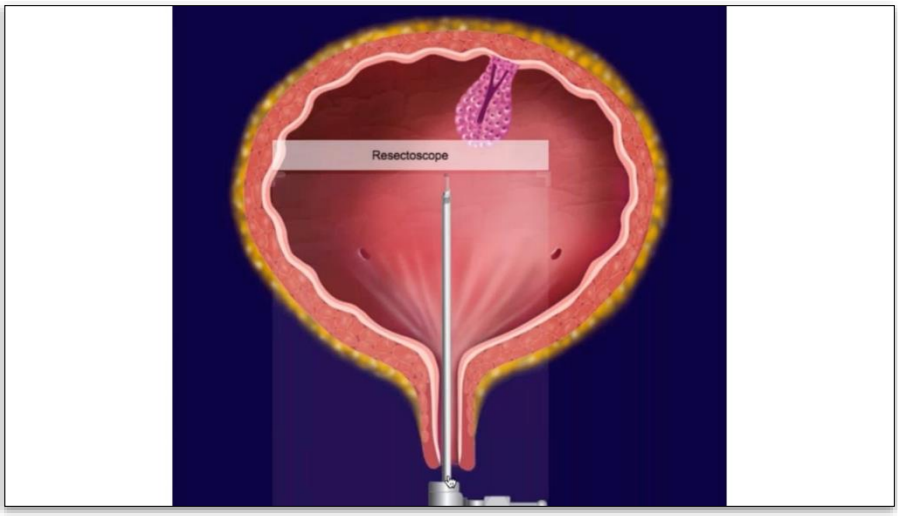
Except for some exceptions in the recent past, those really haven't changed for many decades. A lot of us in the field really feel that for various cancers that for instance, we work on in general urinary oncology, this is arguably one of the ones that needs disruption the most. For instance, look at this slide. Over the last five decades, the red arrow shows mortality from bladder cancer. The death rate really has largely not changed despite all the innovation in medicine. We're just starting to move the needle in bladder cancer, and we need to move it faster. To that end, this is the fourth most common cancer in men. The rates of bladder cancer, the frequency is about double that in men than in women. Despite it being such a relatively common cancer, it receives disproportionately a small fraction of cancer fundings. Thanks in part to BCAN, this has improved over the years, but still more bladder cancer research funding is needed. I really want to give a shout out to BCAN because this is just such a critical organization.



Dr. Alexander Kutikov:

Thanks to folks like Stephanie, it's just so, so well run that over the years that I've been a urological oncologist, I've just seen BCAN grow and provides such great support to our patient community. Thank you BCAN for all that you do. We're going to talk about the following things. I know we have about 40 minutes and I'm going to try to get through it all. But we're going to talk about diagnosis and staging. We're going to talk about cystectomy. I'll drill down into different urinary diversions and talk about sort of some of the issues that come up with these urinary diversions. I'll talk about sexual dysfunction, because this is in a lot of folks minds, especially those that are sexually active who get diagnosed with bladder cancer. It becomes a significant obviously source of anxiety and concern. A lot of questions I get about open versus robotic approach to cystectomy, and I'll speak a little bit about that. I also put in here a few slides on two things that I hear from patients often, "When is the artificial bladder coming? When can we get a bladder off the shelf and make a bladder substitute?"

I'll talk to the research that's been done in that space, and we'll talk about the major effort that's happening in the field about saving the bladder. There is no better bladder than your own, so how can we save the bladder in those people who generally need their bladders removed? Then we'll do some questions.



Let's talk about diagnosis and staging. This is done with endoscopic procedures with what's called the resectoscope. Where we go in, and through the bladder, we actually sample the tumor, we resect the tumor, and we try to sample the wall, the inner wall of the bladder. This is the muscle of the bladder. When we talk about muscle invasive disease, we talk about disease that's invading through the inner lining and into the wall of the bladder. Cysview is something that a lot of folks have not heard about, and this is what's called Blue Light Cystoscopy. Let's see if I can get this to play. Here we go. Blue Light Cystoscopy is a way to get a better assessment of the bladder.

You'll see in this video, which is a video of a cystoscope going into the urethra, here we're going through the male urethra. (Please watch video for this) That was the prostate, and now we're in the bladder. This is a bladder that looks relatively normal. At the top of this bladder here, you see a bubble. This is the bubble that we brought in there with the fluid. It's distended by irrigation fluid, and the little bubbles coalesce into one big bubble at the top. You'll see that the bladder looks relatively normal, but when we do find an area of tumor, which in this bladder is actually what's called on the anterior wall, and an often missed tumor in patients, because as you can see, it's hard for the cystoscope to see up there. But in a second, you'll see my hand sort of pushing the bladder wall through the belly and kind of show in the scope the tumor, a very important technique to do. You can see that with Cysview, with this Blue Light Cystoscopy, you can see the tumor jump out much better than it does just with regular white light cystoscopy. As I'll show you in a minute, there's basically small other little tumors that you can readily see that will sometimes jump out at you that you would have otherwise missed with regular cystoscopy. An important technique, important to find centers that offer this technique, because this is an important

step. Especially for patients with highly recurrent bladder cancer, it allows one to get a clean slate on the bladder before giving intravesical therapy.