Highlighting Clinical Trials | Non-Muscle Invasive Bladder Cancer

Part I: The Basics of NMIBC Clinical Trials

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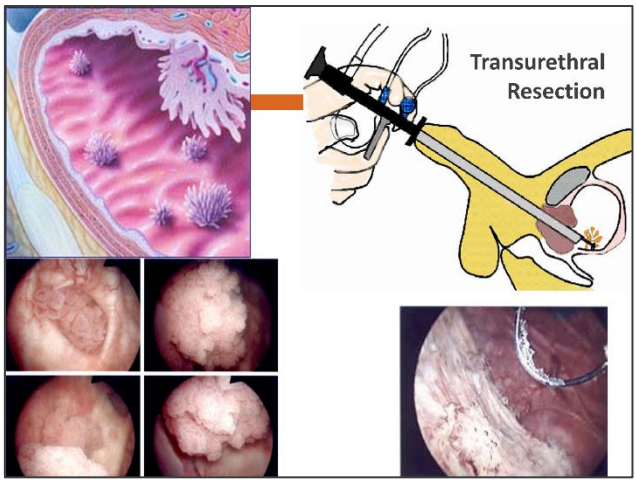
BCAN Patient WEBINAR SERIES

Presented by:

Dr. Robert Svatek (MD) *is an Associate Professor and Chief of the Division of Urologic Oncology at University of Texas Health, San Antonio. His practice is devoted to the care of bladder cancer patients, and he's built a center of excellence for invasive bladder cancer for patients from the south and southwest Texas region. Dr. Svatek actively involved in the clinical trials for bladder cancer and runs an NIH funded cancer immunology lab and focuses on the role of innate immunity in mediating cancer immune surveillance and cancer therapy.*

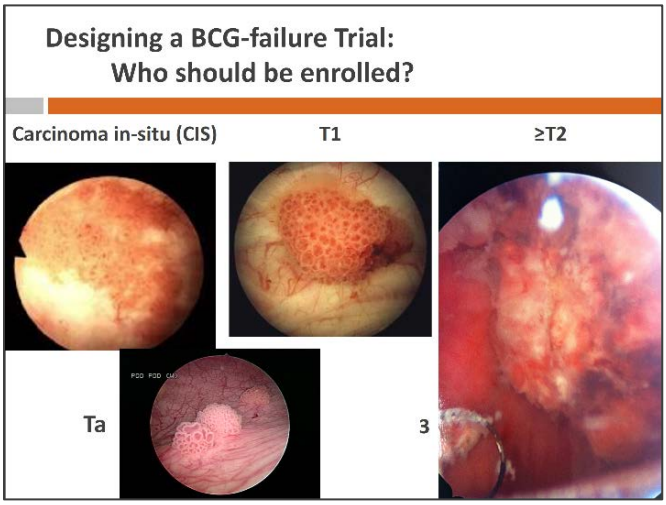
Dr. Svatek: I want to start by just showing a picture. Some of the audience may be kind of new to this. Maybe you just found out about a diagnosis. I just want to start with some very basic things with bladder cancer.



One of the advantages that we have of bladder cancer is this ability to kind of see into the body and to actually diagnose it or stage it, without having to do major surgery. This technique, that I've kind of shown here, is a transurethral resection. It's really been unchanged for many, many years, half a century or more; this is the way that we've diagnosed bladder tumors. It's very effective. With this approach, in most cases, we can remove the tumor, a superficial tumor, completely; and avoid having any kind of major surgery on the organ.

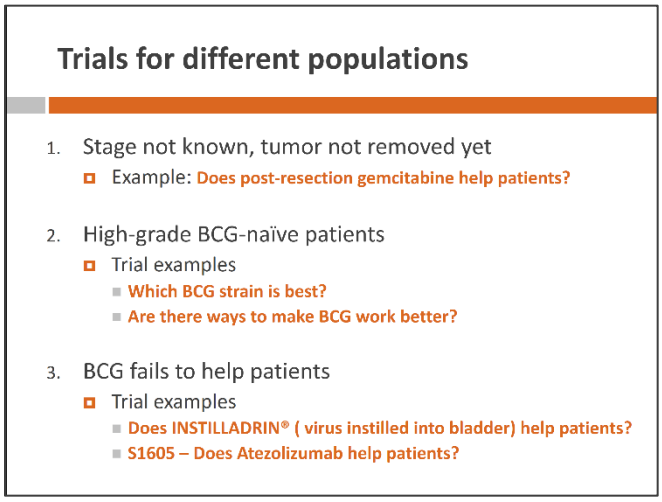
Now, bladder cancer, like many cancers, comes in different shapes and sizes. What I've tried to give here is a couple of examples of the differences between these types of tumors; but it's by no means comprehensive. There are a lot of other features and things that your doctor may talk to you about that can distinguish different types of bladder cancer. Generally speaking, we have two broad categories. One is, let's say, superficial or non-invasive; and then another, more advanced. These really behave like different types of tumors and different types of cancer; so we treat them in some similar ways, but very different ways for certain things.

For example, the one on the top left is carcinoma in-situ. It's generally considered a superficial, not deadly type of tumor; but if left untreated, it can progress to a more advanced tumor. The term in-situ is actually a little bit of a misnomer, because we generally think of in-situ being maybe not aggressive or maybe not a real tumor; but CIS of the bladder is a true tumor, and it's got to be treated. It can't be watched or observed.



The one that we're focusing on today are the non-muscle invasive bladder tumors, which would be characterized as both CIS, Ta, and T1; all three of those there would be non-muscle invasive. Whereas, the one on your right-hand side of your screen is T2 and higher. That means that the tumor has gone into the muscle of the bladder. Those tend to be more advanced and require more aggressive treatment. Usually chemotherapy, bladder removal, radiation; there's different modalities. Today, we're focusing on non-muscle invasive bladder cancer, and those would be the CIS, Ta, and T1.

Now, our focus today is clinical trials, so we'll go right into that. Really, when we're talking about clinical trials for this disease site, they're going to be different depending on what stage in the process. These are, again, the stage of the tumors; and I've highlighted the non-muscle invasive tumors here that are today's focus. We're really not going to focus on any of the T2 or more advanced options, but there will be additional webinars for those as well.



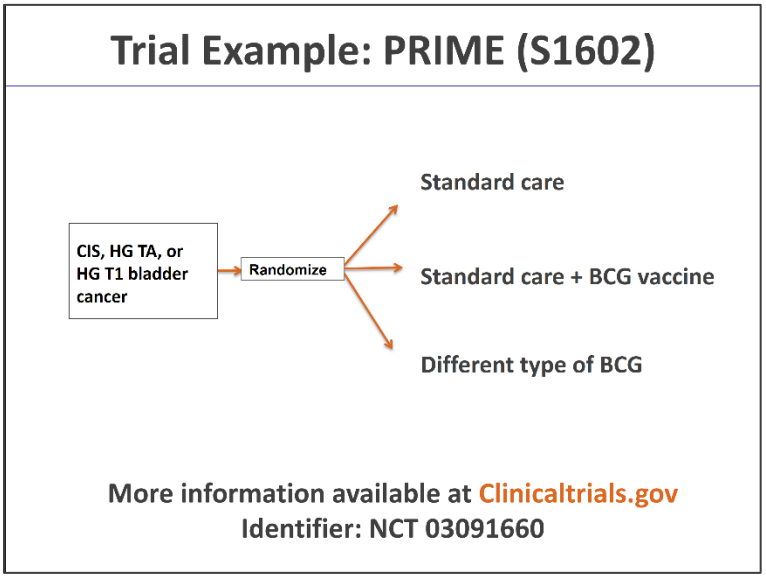
There are trial opportunities, fortunately, in bladder cancer in its early stage at multiple different steps along the way; because there are different challenges at different steps. For example, let's say that you have blood in your urine. You don't even know if you have a bladder tumor or not. The current modality to figure that out is doing a cystoscopy, where we look into the bladder; because CT scans or ultrasounds or other imaging modalities just aren't good enough at determining whether or not you have a tumor. Yet, having to put a scope in the bladder is not comfortable; and certainly, if we had a better way to diagnose it -perhaps with a urine-based biomarker- that would be a huge advance. There's a whole opportunity for people that have blood in their urine to be evaluated with urine-based biomarkers to see if we can identify a biomarker that can distinguish the presence or absence of a tumor.

Another clinical example is a patient that the urologist or the treating physician may have identified a tumor, but they haven't removed it yet. There are clinical trial opportunities for those patients. In those situations, the objective is to determine if there is some type of treatment that we could do to improve the outcome near the time that the bladder tumor is resected or removed. A good example of this was a recent trial where we, along with a lot of other investigators in the United States, asked a question. If we remove a bladder tumor, and we subsequently put chemotherapy into the bladder, immediately after we've removed it; does that help patients? It turns out that it does. It helped patients dramatically. Installation of chemotherapy in the bladder, such as with Gemcitabine or Mitomycin, are now moving to be standard of care for patients that have newly diagnosed non-muscle invasive or superficial bladder tumors.

Now, another setting is, let's say, that you have the diagnosis of a superficial bladder tumor, and it's high-grade. What do we do at that time? Well, the standard of treatment for a high-grade Ta lesion or CIS, for example, would be installation of a therapy called BCG. BCG is basically a type of bacteria that's put into the bladder. What it does is stimulate the body's immune system to facilitate and remove tumors that may be there and may be undetected or prevent new tumors from developing, and it works really well; but there are a lot of unanswered questions. Why doesn't it work in all patients? Why does a significant number of patients still relapse or have tumors come back? There are different strains of BCG available. We don't know, today, what the best strain is. There are clinical trials going on right now to address that.

Finally, there are patients that unfortunately don't respond to BCG; or they respond at first, but then they subsequently suffer relapse. These are really challenging, because we don't have a lot of available options for those patients, short of bladder removal.

In my last few minutes, I want to give another example, or a little bit more detailed example, of a trial I'm intimately familiar with, for patients that have newly diagnosed high-grade superficial or non-muscle invasive bladder cancer. That's using a BCG vaccine. In the United States, we don't use BCG vaccine at childbirth or in the early child period, as they do in Europe or Africa and Asia; because tuberculosis is not as big of a problem here in the US as it is in those countries. It turns out that a BCG vaccine given in the shoulder, as shown there, could actually maybe improve the response of BCG given into the bladder.



This is a good example of a current clinical trial that's ongoing right now. Asking a question of whether or not giving this type of vaccine in the shoulder before we give the one into the bladder could help patients? Patients with superficial or non-muscle invasive bladder cancer are approached and asked if they are interested in the trial. If they agree to the trial, and if they're eligible to the trial, they'll randomize to one of three different arms. Arm one is standard BCG, which is what we use in the US currently. Arm two is BCG plus the vaccine given 21 days prior to the regular BCG. Then arm three is using a different type of BCG. This third type of BCG we think, potentially, could have better properties than the one that we're using right now; or at least may not be any different, and could offer an alternative to the existing one.

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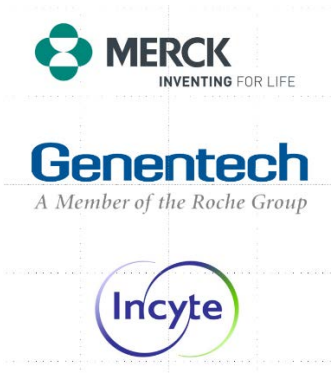

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