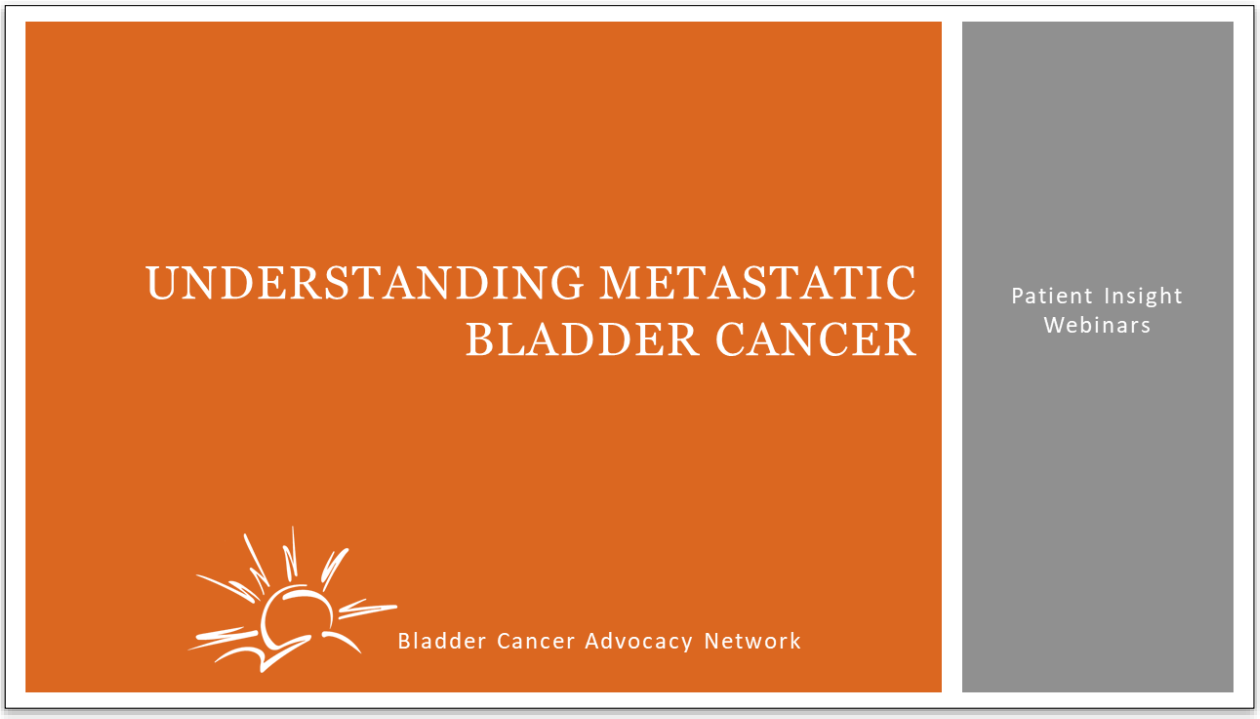


---

### Stephanie Chisolm:

This has been phenomenal, Dr. Morgans. I think that your explanations of everything have been absolutely on point and I hope in really plain language for people to really get it, because as you said, understanding those survival curves, it's really scary from a patient's perspective when they see that and they don't know how to read it. So I thank you for doing that. We have a couple of questions that have come in and we're not going to have time for a whole lot of questions. But when you're doing a comparison between survival rates between local metastatic and then distant disease, how do you address that with a patient? What are some of the concerns that patients should know about?

### Dr. Morgans:

Yeah. So anytime the cancer has spread, it's usually something that it's going to be more challenging and more challenging to cure. So I always with as much tenderness as possible, try to explain what our goals are of treatment are going to be, because sometimes even spreading into lymph nodes and more distant lymph nodes, we can't always cure people. And we do need to make sure that people understand, I think what they're facing when they're making decisions for treatment, because some people will choose not to do things or choose to do things based on that. So that's important, setting expectations and setting thoughts and saying, "Of course, we're going to try whatever you're willing to try, but I need you to understand where we stand."

And then when we're talking about more local disease where maybe the symptoms are not so bad versus more distant metastatic disease, perhaps there's cancer growing in a bone that's causing a lot of pain, we need to think not just about how we try to get that cancer back under control in general, which, of course, we're trying to do, but what else do we need to do to deal with the symptom that's coming from that? Do we need radiation to a bone to try to help that person feel better fast from that

pain, because that radiation can be really, really effective in reducing pain control or improving pain control, reducing pain, or is there something that this person's having in terms of shortness of breath from something in their lungs and we need to either use radiation or use other methods, even oxygen potentially to try to help that person.

So what can we do to deal with the symptoms? And I think there are more symptoms as the disease gets further and further outside of the bladder. And so we just need to think creatively about not just treating the cancer overall, which, of course, we need to do, but also making sure that if there are other things that we can recognize and reverse, we take care of those as well.

### Stephanie Chisolm:

Right. So is that where you as a medical oncologist, would involve a palliative care team to help that patient?

### Dr. Morgans:

Absolutely. I say absolutely, because I'm very comfortable with palliative care, because of the way I think of palliative care. I think of palliative care as a team that is expert at symptom management. These folks know how to deal with any symptom that comes your way, whether it is pain, whether it is constipation, whether it's nausea or fatigue. They have ways to deal with that and are just as specialized and just as aggressive at going after those symptoms as I am specialized and aggressive in going after the cancer itself.

### Dr. Morgans:

But I feel very comfortable with them, because I know their expertise and I know their goals. And I know that I don't just involve them when I'm trying to talk to somebody about hospice or end of life, but there can be mixed emotions when we talk about palliative care. And I recognize that and so do the palliative care doctors. And I think that we as a community, need to support each other in those perceptions. And so I do talk to patients and say, "Look, I want to involve them because they are expert." But I always ask a person, "Are you comfortable? Can we talk about what that means?" Because sometimes that word, palliative care, is very upsetting.

### Stephanie Chisolm:

Yeah. I think a lot of patients think that, that means there's nothing left for them to do and yet they can still help manage those symptoms. So I think that's really important and patients should ask about it and not be afraid to at least inquire if there's something that someone on that team can do to assist in them being able to stay on a treatment for a longer period of time so it has a better chance of working. We do have one question that came in. Has CAR T-cell therapy been used in bladder cancer treatment? Or is this still early to talk about that?

### Dr. Morgans:

So it's still very, very early days to talk about that, but CAR T is something that in solid tumors in general is of high interest. Now, of course, CAR T are these programmed T-cells that are trying to go after specific cancer cells in the body. They're used in blood type cancers pretty frequently now or more commonly now, and they're even used against cancers that kids are facing. So they're used in pediatric patients. But they are still in their very early days in solid tumors. And we think of bladder cancer as an organ tumor or a solid tumor. So early days here.

The one caveat I would say about CAR Ts is that we have to be respectful of this particular approach to treatment. These are treatments that can be highly effective, but can be highly toxic. And we as a field are trying to figure out how to best support patients to go through that treatment. And sometimes that treatment in its best case scenario or in its expected scenario is delivered in an ICU type setting, because we do expect that there will be changes in blood pressure and organ dysfunction, kidney failure, liver failure, lots of problems that we can expect because it's actually part of the process that the cancer cells are dying in a way that is... It's a very highly potent treatment that causes all of this against the cancer, but also causes problems with the regular body function.

So, especially as we're dealing with and helping to care for older adults with bladder cancer or urothelial cancer, we have to be really cautious there. We don't want to cause harm when we're trying to help. But it is important to just be respectful of the treatment, but it is something that early days, but I'm sure is very, very high interest.

### Stephanie Chisolm:

Absolutely. Well, again, this has been phenomenal. And there's one more question. Perhaps, we have time. Does expression of PD-L1 on the tumor play a role in how well the patient is likely to respond to chemotherapy. Is there a pattern that you've seen?

### Dr. Morgans:

So great question. So it's not supposed to necessarily show how well someone might respond to chemotherapy, it's supposed to show how well someone might respond to immunotherapy. But in general, the higher the PD-L1 expression, it looks like the better the person does, whether they're getting PD-L1 targeted treatment immunotherapy or chemotherapy. But it's not a one to one correlation. So you could have very low PD-1 or PD-L1 expression and still respond to immunotherapy. You could have very high expression and not respond to immunotherapy. So it's not perfect. But we in general think the higher expression, maybe the better response to any therapy and the higher the likelihood that someone will respond to immunotherapy, but it's not perfect.

### Stephanie Chisolm:

Right. So that was something that when it first came out was really noticeable. And people started talking about it. If they didn't have it, would they still get this treatment? And then you found out that you could still respond. So I think that, that's really encouraging that again, the science is still going on and there are all these trials that are still happening around the country. Dr. Morgans is certainly doing her share of clinical trials at Dana-Farber. BCAN is certainly supporting bladder cancer research to make sure that we're always moving that needle forward.

And I think since BCAN began in 2005, we didn't have a whole lot going on and we've seen leaps and bounds over the last five or six years. And I do think it's an exciting time. And it's really exciting because of young and inquisitive clinician researchers like you. And you've done an amazing job breaking this down for everybody. And we really do appreciate it.

I'm going to go ahead and end the program, because we're right on time now.

BCAN would like to thank our sponsors


for their support