Pathology Driving Decisions

Part II: Radiation Oncology

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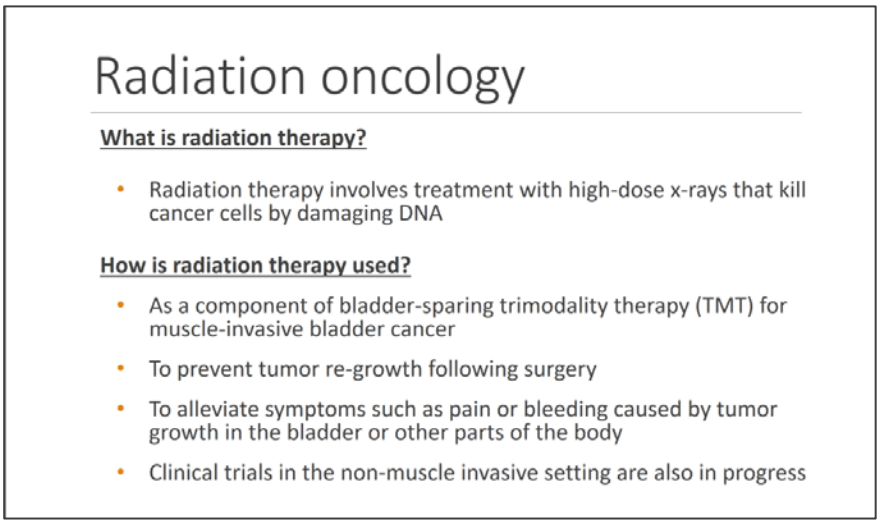
BCAN Patient WEBINAR SERIES

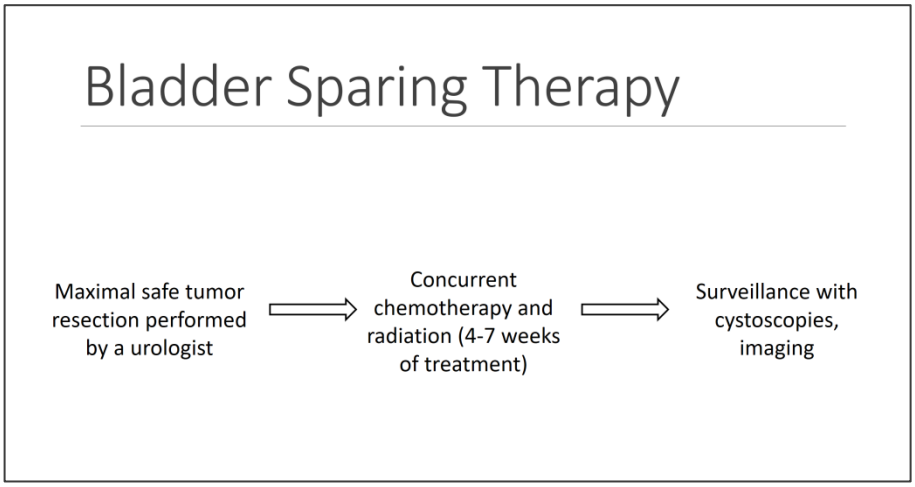
Presented by:

Dr. Kent Mouw *is a Radiation Oncologist at Dana-Farber Cancer Institute and Brigham and Women's Hospital. He obtained his medical and graduate degrees from the University of Chicago and completed a Radiation Oncology Residency in the Harvard Radiation Oncology Program a Post-Doctoral Research Fellowship at Dana-Farber Cancer Institute. In addition to providing radiation oncology care for patients with genitourinary malignancies including bladder and prostate cancer, Dr. Mouw oversees an NHI-funded basic and translational research laboratory that investigates the role of DNA repair pathways associated with alterations in bladder cancer and other tumor types. Dr. Mouw is a recipient of BCAN's 2016 Stephen Hale Gusheé Young Investigator Award.*

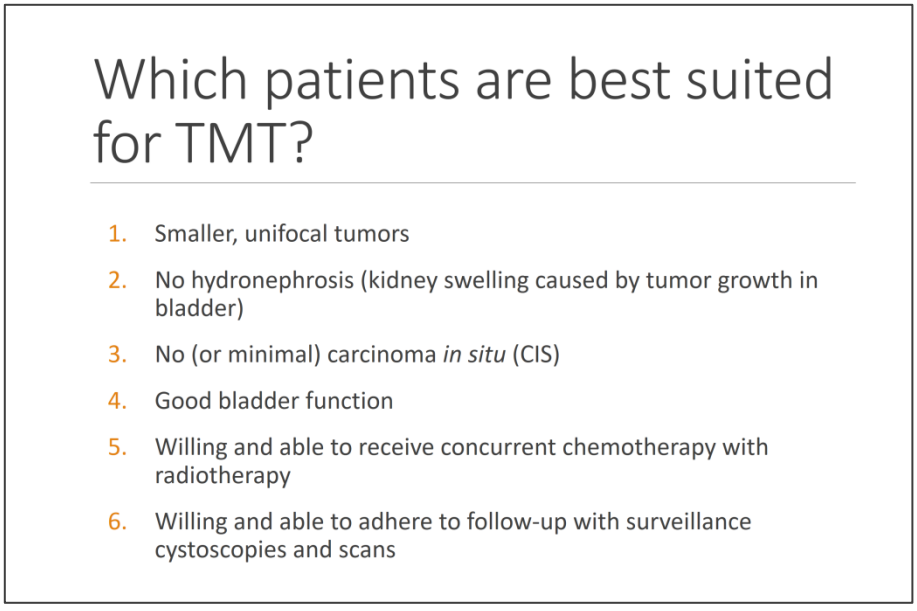
Dr. Mouw: I'm a Radiation Oncologist which means I use Radiation Therapy to treat patients with bladder cancer. Radiation Therapy is really just high dose x-rays that I deliver daily to patients. Typically the patients come into the radiation department, get their treatment, and then go home the same day. It's a non-invasive type of treatment that usually lasts for as little as one week or as many as several weeks of daily treatments. Radiation is used in several contexts and bladder cancer and I just want to go through each of these briefly.

It's a component of what Dr. Mossanen already referred to as bladder preserving therapy. This is for select patients with muscle-invasive bladder cancer. Radiation can also be used after surgery to prevent the tumor regrowth in the area where the bladder used to be. In addition, for people who have more advanced disease, radiation can be used to alleviate symptoms such as pain or bleeding that are caused by tumor growth, either in the bladder or in other parts of the body like the bones or the liver. Finally, radiation can be used in very select cases of recurrent non-muscle invasive bladder cancer, usually performed in the context of a clinical trial.





So first I wanted to outline in a bit more detail what Bladder Preservation Therapy, our so-called trimodality therapy, consists of. This involves care with all three of the folks that you're hearing from tonight. Patients who are candidates for Bladder Preservation Therapy first undergo a TURBT performed by a Urologist like Dr. Mossanen. That is to remove the majority of the tumor from the inside of the bladder. Once they're recovered from that procedure, patients then undergo chemotherapy and radiation at the same time. These are daily radiation treatments that usually last four to seven weeks of daily treatments along with chemotherapy that's often delivered as frequently as once per week. The goal of the chemotherapy and the radiation is to work together to kill all of the cancer cells in the bladder without permanently damaging any of the normal bladder cells or any of the organs around the bladder, like the rectum and the bowel and the bones. When patients complete concurrent chemotherapy and radiation, they then recover from therapy and begin close surveillance which involves cystoscopies performed by a Urologist, as well as imaging studies to ensure that the cancer has not spread outside the bladder.



A common question that comes up is, "Which patients are best suited for bladder preservation or trimodality therapy?" Patients who typically are best-suited for this type of care include those patients who have relatively smaller tumors that are localized to a single site within the bladder. Bladder tumors have the potential to cause swelling of the kidneys, which is called hydronephrosis. The ideal patients for bladder preservation are those who don't have hydronephrosis; that is, they don't have swelling of their kidneys caused by tumor growth inside the bladder. Ideal candidates also have very little or no carcinoma in situ. This is what Dr. Mossanen referred to earlier as cancer cells growing in the urothelial lining of the bladder. Patients who are best suited for bladder

preservation also have good baseline urinary function; that is, their bladder works well for them and it's worth preserving. Patients who receive bladder preservation therapy are best served when they can receive radiation in combination with concurrent chemotherapy because there are several clinical trials that have shown that the addition of chemotherapy improves outcomes who have radiation therapy for bladder cancer. And finally, patients have to be willing and able to adhere to the close follow-up with surveillance cystoscopies and CT scans that are required after they complete chemotherapy and radiation.

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